

Are the Sixes Good Economy Buys? **COMPARISON TEST**
By DON FRANCISCO

TECHNOLOGY DEPT.

MOTOR TRENDS

TESTING THE NEWEST IMPORTS
The Hot Little ABARTH
Improved SUNBEAM-RAPIER
The Ever-Potent PORSCHE

JULY 1958 35c



MT Selects the
BEST BUYS
in
USED CARS!

Also
Hints on How to Buy

See page 20



CUSTOM TRENDS—East and West

"I cleaned and waxed our car in 67 minutes



with Du Pont's **NEW CAR WAX**



...it still looks great 6 months later"

says Robert MacMorran of Glenview, Ill., after waxing his '55 Chevrolet with Du Pont New Car Wax. Bob found that this new paste wax is as easy to use as liquid polish, because it cleans, waxes and glazes—all in *one easy application*. And it protects with real Carnauba wax, the *toughest wax known*. Proof of protection is the long-lasting gleam. Six months, nine car washings later, the finish shows clear reflections of Bob and his son. Try Du Pont New Car Wax—it makes any good finish look new. At service stations and auto supply stores. Only \$2.00.



BETTER THINGS FOR BETTER LIVING...THROUGH CHEMISTRY



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(If your problems are gas waste, flooding, dying, hard starting and poor performance, it will pay you to read this Mileage Minder ad)

NEW IMPROVED!

MILEAGE MINDER

WITH MAGNETIC TROUBLE TRAP

**SAVES GAS—IMPROVES
POWER AND PERFORMANCE
IN NEW OR OLD CAR!**

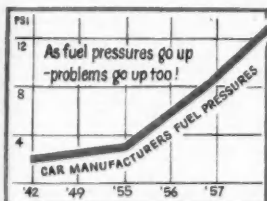
- Read Here How the New Improved Mileage Minder Unconditionally Guarantees More Power, Better Performance, Greater Gas Mileage.

Most of the troubles that plague modern cars are directly traceable to the fuel system. As motors have become more and more compact and complicated, the demands of the fuel system have become greater and greater. Fuel pumps and carburetors have also become more complicated and delicate. The fuel pump advances the gasoline from the gas tank to the carburetor in pulsating surges created by the cam action of the pump. In turn, the carburetor admits gasoline through a brass orifice, which is opened and closed by a steel needle, which is controlled by the action of a float-bowl.

More Complex Cars ... More Problems

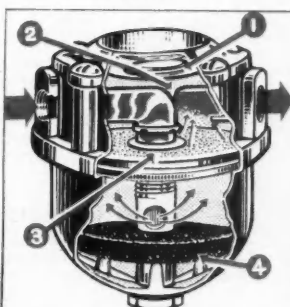
In early engines, when fuel pressures were low and engines far less complex, the problem was not nearly so serious because we simply didn't expect the same performance that we do now.

Now, however, automotive fuel systems have become extremely complex, expensive and as delicate as a Swiss watch. Fuel system pressures have increased to the point that many cars demand fuel pressures of six, seven and even eight pounds per inch, where before only two pounds or even less were required.



These extreme pressures are necessary for the performance of the engine, BUT what has happened is this: the fuel pump hammers the gasoline in pulsating surges, at pressures five or six times higher than before. The impact of these pressure thrusts has become so violent an audible knock is often heard.

Furthermore, modern engines demand absolutely clean gasoline — without mineral or metallic impurities—so that there can be no clogging of the carburetor.



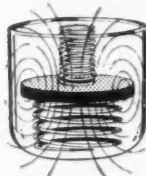
New Mileage Minder Has The Answer

Mileage Minder is a combination pressure stabilizer, pulsation dampener and fuel purifier, which perfectly meets the conditions that are causing the trouble.

① Mileage Minder contains a dual neoprene diaphragm (U.S. Patent No. 2544289) which is spring-supported and acts as a pressure storage chamber; cushions the impact of the gasoline as it comes from the fuel pump; then passes fuel on to the carburetor in a smooth, even flow. Mileage Minder does not reduce fuel pressure. Instead it smooths it out at the proper pressure for finest and most economical performance.

② Mileage Minder's pressure chamber principle positively traps vapor-locking gasses, which cannot pass on through the fuel stream until condensed and liquefied.

③ Mileage Minder contains a sintered bronze fuel filter, which positively removes all dust, dirt and sand, even as fine as .003".



④ Each new Mileage Minder is equipped with a magnetic Trouble Trap (Patents applied for). This feature alone is worth its weight in gas savings. A powerful XH-297 ceramic magnet is positioned directly in the gas stream so that its magnetic field captures and holds all troublesome iron and steel oxides, weld chips, rust flakes, thread shavings or any ferrous metallic particles.

Quick, Dramatic Results

The results are noticeable in your car at once. They are:

- Better performance, more power and pickup.
- Ends gas waste. Users report savings up to 1 m.p.g.
- Cures flooding, stalling, jerky acceleration, hard starting, gasping.
- Minimizes vapor lock and bad-smelling gas fumes.
- Does not reduce manufacturers' recommended pressures.

MONEY SAVING NO RISK OFFER

Now it is possible for you to experience the benefits of Mileage Minder on your own car—on a money-back guaranteed basis. If you're not completely satisfied, just return Mileage Minder and your money will be cheerfully refunded. This guarantee applies whether you buy direct or from any service station, car dealer or garage.

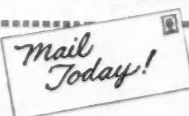
If you ordered Mileage Minder and Trouble Trap separately, the cost would be \$8.90. Now you may order your Mileage Minder equipped with magnetic Trouble Trap at a significant saving . . . just \$7.95, complete with fittings for your car. Mileage Minder is easily installed by anyone in just a few minutes, with the simplest of tools.

New Mileage Minder has a compact metal bowl, break-proof and heat-proof. Cover is brilliantly chrome plated, the body golden dichromate.

Remember — Mileage Minder pays for itself in gas savings and improved performance, or your money refunded.

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**Today! . . . Mail This Money-Saving
No-Risk COUPON!**



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Please send Mileage Minder with magnetic Trouble Trap, with satisfaction guaranteed. (Quickly pays for itself or money refunded.)

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Address _____

City _____ State _____

Make, year and model of car _____

Official Report #5

SIMCA Sets New Trans-American Speed Record



The fastest thing on wheels between New York and Los Angeles. SIMCA made it in 46 hours, 3 minutes, beating the time of our best streamliners by over 8 hours. You ask: How can a car which costs so surprisingly little do so much? The answer is **POWER**. Not brute horsepower, but a SIMCA feature—*balanced power*. Nothing wasted. That's how SIMCA delivered 42.6 miles per gallon in official tests. And that's how SIMCA pulled a 9 ton bus. *Balanced power*. The best combination of the most desirable characteristics. Biggest bonus: Family-size room and comfort. You get it all, in the great new SIMCA.

Proven 42.6 Miles-Per-Gallon Economy • Power-Start 12 Volt Ignition System • Family-Size 4 Door, 5 Passenger Room • Safe Engine-Buffer Unitized Design • Big Ride Ball-Joint Suspension Reclining Deep-Foam Airliner Seats • Both 4 Cylinder and V-8 Available



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4 MOTOR TREND/JULY 1958

JULY 1958

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Assistant—J. Bryce Gillespie
Production—Y. Hull, M. Donnell

PHOTOGRAPHERS

Chief—Robert D'Olivo
Alfred Palacy, Colin Creitz

CONTRIBUTING EDITORS

Classics—Robert J. Gottlieb
Customs—James E. Potter
Engineering—John Booth
Imported Car Tests—Bob Rolofson
Racing—Sam Hanks
Technical Advisor—D. H. Moreton
U.S. Car Tests—Don Francisco

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PUBLISHER

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NEXT MONTH

What Detroit's Cars Need...

... And What They'll Have

Four-Wagon Road Test

Testing Three Imports

MOTOR TREND



THE COVER:
"Drool - bait" for sports car lovers—MT tester Bob Rolofson stands beside Porsche Speedster and Abarth-Fiat 750. Photo by Bob D'Olivo. Below is Joe Tocchini's eye-catching customized '51 Ford. Photo by George Barris.

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STOP BATTERY and IGNITION FAILURE!



Battery Brain
gives your car battery

NEW LIFE!



Battery Brain, a new scientifically designed Electronic Computer automatically recharges your Car Battery each time you start your engine. Battery Brain controls the regulator and generator, restoring your battery to full charge quickly . . . compensating for normal battery aging. The amperage and voltage of your car battery is maintained to full capacity at all times. Battery Brain produces peak battery and ignition performance, giving instantaneous starting, better combustion, greater headlight illumination, smoother performance, greater economy, less battery sulfation, longer spark plug life and less voltage regulator adjustment.

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YEAR & MAKE OF CAR
(See page 76, this issue, for complete editorial test)

NEW

ignition analyzer kit

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WE HAVE BEEN IN on many discussions, both inside and outside our offices, as to why new cars are not selling at the rate they were last year. We've heard all sorts of reasons, ranging from, "They have too much horsepower," to "I don't trust *any* new car dealer."

Some of the other excuses for not buying a new '58 have included:

"I can't afford one. They're too high."

"I don't like any of the styles."

"Our salesmen don't know how to get out there and make the 'hard sell'."

"They're just too darn big. Why don't they make them smaller like the little foreign jobs?"

"I'm confused by the prices I get from different dealers. You can't tell if you're getting a good deal or are being taken."

"They aren't as economical as they used to be."

"People are just waiting to see what's going to happen to the economy."

"I'm saving my money. I can't see buying a car just because they tell me, 'You Auto Buy Now.'"

We have our own personal reasons why we think the new cars are not selling, and we have yet to see a concise explanation that we would buy in its entirety. And speaking of buying, that's just what we will do if we can get from you *your* reason for not buying a new car this year.

For the best letter received on this subject, of 250 words or less (and on one side of a sheet of paper, please), we will pay \$25. For the second best letter, in our estimation, we will give \$15, and for the third best, \$10.

So that you will later know how other readers feel about the subject, we will publish as many letters as space permits. Each reader who has his letter published in whole or in part will either receive a free one-year subscription to **MOTOR TREND** or have his present one extended one year. In addition, the first 500 who write in but do not get their letters published will receive a free copy of Trend Book No. 166, *Handy Car Hints*.

If you were in the market for a new car this year, but didn't buy it for one reason or another, sharpen up your pencil, ink your pen, or oil up your typewriter. Besides the chance to get it off your chest, you may make enough to keep you in cigarettes for a few weeks. Sorry, but we cannot acknowledge any requests for information on the winners until the results are published in a future issue of **MOTOR TREND**. You have until July 15th.

Paul K. ...


CHEVY'S new FULL COIL SUSPENSION tamed this nightmare trail over the Andes!

Imagine a rock corkscrew two miles high!—that's the terrifying General San Martin Highway across the Andes. Twice Chevrolet slammed over this gullied boulder-strewn trail in its record 41-hour run across South America and back. And every foot of the way Chevy's new Full Coil suspension performed seeming miracles, taking the jounce and bounce out of chuckholes, holding the car true and level around wild curves, smothering fist-size stones in its deep resiliency, checking front-end "dive" in savage braking. The test-drivers were convinced this four-coil suspension, with its unique arms to control the rear axle, is the finest springing ever achieved in Chevrolet's class. When you drive the '58 Chevy we think you'll agree—on the boulevard or over the roughest back road you can find in your home town! . . . Chevrolet Division of General Motors, Detroit 2, Michigan.



Corkscrew turns furnished convincing test of Full Coil stability, were no strain even for 98-pound girl co-driver.

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LATEST
1957 OFFICIAL INDIANAPOLIS
"500" YEARBOOK



Includes Monza results. This book is larger and more complete than ever before and has more pages inasmuch as it will include a story with photos on the 500 miles Race held at Monza, Italy, in which Indianapolis drivers competed. Hundreds of professional photographs are included and the book will have more Indianapolis data, regular and technical, than heretofore. . . .
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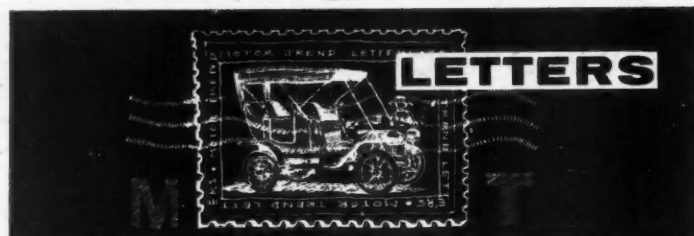
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 SEE YOUR DEALER TODAY

"CAR OF THE YEAR"

Gentlemen:

Now that the Thunderbird has switched to unit body construction, which was pioneered in this country by American Motors, you give them an award.

I suppose if a Ford should ever become as economical to operate as a Rambler you'll give Ford an award for introducing economy to the American automobile scene.

Abner Hord

Huntington, W. Va.

Gentlemen:

I nominate to oblivion the 1958 Thunderbird. Its front end is ugly, the rear deck dowdy, the side lines lack symmetry.

H. S. Durland

Brooklyn, N. Y.

Dear Mr. Woron:

T H U N D E R B I R D ?

Forest P. Clark

State College, Pa.

"SHARE THE PROFITS"

Editor:

About this Reuther vs. Detroit "Share the Profits." L. L. Colbert, President of Chrysler Corp., says rising costs are caused by people not giving a full day's work for a full day's pay.

It seems to me that most of the time they give a man more work to do than he can get done in the required length of time. There are times when he may not complete his job due to the rate of speed they are working the people on the line. That is where

a lot of these lemons originate.
 A disgusted reader.

Dear Mr. Woron:

Your April coverage of Mr. Reuther's headline-grabbing seems misguided and naive. Though giving both sides, the makeup of the spread is such as to convey an apparent opinion.

Do you intend to start a "labor relations" column?

M. J. Markey

Seattle, Wash.

GOOEY MESS

Gentlemen:

I think the term "Candy Apple" aptly describes some of the gooeey, sticky-looking forms adorning your April issue.

In their rush to be "different," most customizers fall into the same mediocre pattern and multi-hues, stripes, flutes. Occasionally something nice appears—whether by accident or intent—but the majority are beautifully made, illogical, mismatched assemblages of disconnected parts.

As for me, I'll take Farina. (And Ghia, and Vignale, and Zagato.)

Neil F. Kimes

Van Nuys, Calif.

NOT SO IN CANADA

Dear Sir:

Your "Memo from the Editor" in the May issue says that Ford outsold Chevrolet by 37,000 units in 1957. No doubt you mean in the U.S.

(continued on next page)

BUICK LOYALTY LEAGUE

Gentlemen:

Referring to Don Francisco's article in the May issue of MOTOR TREND, wherein he gives his candid opinion of the 1958 Buicks, I feel sure the hearts of many a Buick owner will be gladdened to know that the '58 models possess at least two virtues—a good engine and good brakes. Since 95 per cent of our driving is Stop and Go, what, after all, could be more important? A good engine to start you, and good brakes to stop you.

C. P. Campbell

Los Angeles

Dear Sirs:

Our Buick is sure-footed, and passing can be done with ease. Buick is a car with plenty of performance and get-away as well as a prestige automobile.

A. Sam Amos

New Lebanon, Ohio

Dear Sir:

You're darn right Buick clings to the Dynaflo—the smoothest, simplest designed, yet most advanced transmission on the road today.

Dean Colley

Chesterton, Ind.

Gentlemen:

Let's face facts—Dynaflo is a good transmission, proven by the number on the road and those sold through the years; also proven by the number used in law enforcement work; also proven by the number that have participated in, and won, drag races.

Donald K. Burlingham

Milwaukee, Wis.

Dear Editor:

The Buick I own is one of the best-riding American cars on the road today. The performance is exceptionally good, and the Buick is an excellent all-around automobile.

Charles N. Bunds

Tullohoma, Tenn.

Dear Sir:

Buick does not build a car to be hot-rodged. The cars are built for those who can afford the finest in motoring. This includes smoothness and a soft ride.

D:le L. Perkins

Flint, Mich.

Don Francisco:

You said it seems a shame to waste a 364-cubic-inch engine of the caliber of the Buick by hooking it to such a device [Dynaflo]. You name a better one and prove it to me.

Edward Stahl

Ravenna, Ohio

FOR THE PROSECUTION

Dear Sir:

I think your article on the 1958 Buicks, particularly the Air-Poise ride, is a classic. I purchased a '58 Buick and have driven it approximately 3000 miles. Your remarks concerning this automobile are the most accurate description possible of a very unsatisfactory automobile.

F. F. Sylvester

Short Hills, N. J.

Whitby, Ontario

SERVICE PROBLEM

Dear Sir:

Sandy L. Schoenstein Oceanside, L.I., N.Y.

GIVE US WHAT WE WANT

Gentlemen:

I believe the public does not want an austere car, but they do not want behemoths either. What many people who do much of their driving in and near cities want is a compact car that is fancily trimmed, with easy entrance and exit, and comfortable seating. More than anything the public wants more miles per gallon—not ton-miles or other fancy phrases that mean little when one pays the gas bill. They also want better construction.

Daniel R. Robinson

Miami, Fla.

STOPPING THE SHAKES

Gentlemen:

I drive a 1955 Buick Century and have experienced what might be called a "vertical shake" on certain types of road, principally freeways, when driving between 55 and 65 mph. At least 90 per cent of this shake was eliminated on my car by doing two things:

- (1) Carefully balancing all four wheels.
- (2) Draining the lightweight oil from rear shock absorbers and replacing with No. 30 engine oil. This gave a firmer ride, and the car hasn't "bottomed" since.

C. P. Campbell Westminster, Calif.

IMAGINE MY SURPRISE!

Gentlemen:

On your Questions and Answers in the March '58 issue about vibrations at 65 mph on a Ford—I had the same trouble and found that *undercoating* had been sprayed on the drive shaft, throwing it out of balance! C. M. DeWitt Maywood, Ill.

C. M. DeWitt

Maywood, Ill.

Play this by ear for a moment: This world-famous British beauty averages 60,000 miles without a major overhaul . . . does up to 78 miles an hour . . . gives 40 miles to the gallon . . . seats a family with hat and leg room to spare . . . gives 30 cu. ft. of carrying space with back seats folded down. Yes, the 1958 Triumph Sedan (or Estate Wagon at \$1899.*) is your sweetest performance value. Come for a guest-drive soon at your nearest dealer. *If you're going to Europe, send for our Overseas Delivery Brochure.* STANDARD-TRIUMPH MOTOR CO.

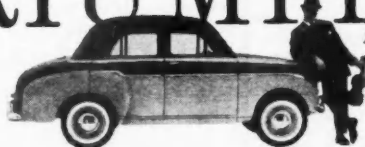
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"One car in 1959 will have a compound contour windshield which will extend well back into the forward end of the roof line, permitting the driver to see a traffic light almost directly overhead." TRUE—All GM lines for 1959 will have this type windshield and some models will have similar rear windows or back-lights.

"Some cars in 1959 will have cyclops headlights mounted in the center of the radiator with normal running lights mounted in the fenders."

TRUE—At least as of now. Our spies say Oldsmobile will divide its lighting equipment in this way—but, of course, that can be changed.

"Willys Motors Inc. of Toledo, Ohio, in conjunction with other American interests, will shortly resume production of its passenger car lines (discontinued in the United States with the 1954 model) at the Sao Paulo, Brazil plant. The cars will be imported to the U.S. to compete with other foreign cars for a share of the American small-car market."

FALSE—It is true that negotiations are currently being conducted between Willys affiliates in Brazil and Brazilian government officials to resume production of Willys passenger cars at Sao Paulo; however, production would be strictly for the South American market. Willys here would supply certain components, others would be produced and assembled in Brazil. Except for improvements developed since the line was discontinued, the car will be a replica of the 1954 models. Start of production hinges on government approval. No other American interests are involved.

"One American high-priced car soon will be offered with a de Dion-type rear axle combining the transmission and differential in one unit which will provide independent suspension for the rear wheels."

TRUE—Most companies were developing a rear suspension of this type which would enable them to lower car bodies still further without sacrificing headroom or further increasing the size of the drive-

shaft tunnel. It will probably appear first on Continental and may even make its debut in 1959.

"General Motors divisions will soon shift to the unitized body construction à la Rambler, Lincoln, T-Bird and many foreign imports in which the frame is an integral part of the body structure."

FALSE—Among rumors this is a hardy perennial that pops up every spring. Advocates of unitized construction argue that this method facilitates lowering car profiles. Current GM frame designs offer no difficult problems in this regard and unquestionably will be continued.

"Swivel seats that will enable occupants to enter or leave a car with a low roof line with less difficulty are next on the industry's agenda."

TRUE—This idea is being seriously considered and may even be offered in some models in 1959 lines. However, it would be more practical for special four-place jobs than in a six-passenger sedan.

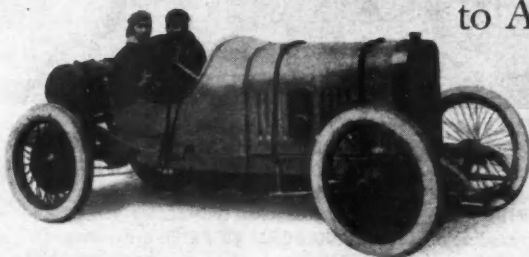
"Because most domestic tire manufacturers are now offering tires for 13-inch wheels to fit foreign cars, some American cars may adopt these sizes in order to still further lower car height for 1959."

FALSE—While some stylists might want to go in this direction they will be overruled by the engineering departments, who are having plenty of headaches with the present 14-inchers. Smaller wheels would further limit brake drum diameters unless they could switch to inboard brakes which current front end designs will not permit.

"One car for 1959 will be equipped with enormous tail lights seven to eight inches in diameter."

POSSIBLE—But, if this rumor is true we have not been able to put the finger on the maker. There is considerable public reaction against tampering with tail lights to attain identifying designs. Tail lights serve a more important function. Talk, even now, is that over-bright tail lights may be linked with low beam switch on headlamps to reduce tail light glare in city driving.

In 1913...PEUGEOT introduced the modern small, fast engine
to American racing
in this Indianapolis
Speedway winner!



Now in 1958...

PEUGEOT comes over from France again
with this excitingly sensible Sportsedan!



SPECIFICATIONS

Engine: 1,468 cc.
Bore and Stroke: 80 mm x 73 mm
Compression Ratio: 7.5
Cylinder: removable wet liner
Cylinder Head: hemispherical combustion chamber
Valve Arrangement: overhead
Brake Horse Power: 65 at 4750 rpm
Overall Length: 14 ft. 8 in.
Overall Width: 5 ft. 6 in.
Battery: 12 volt, 58 amp. hr.

Peugeot—one of the world's great names in auto making—now brings to America a 5-6 passenger family sedan that has all the spirit and glow of a sports car. Body is single unit construction. The 4 cylinder Peugeot engine has fancy get-up-and-go, gives 30 miles per gallon and over 80 mph top speed. The very sensible Peugeot price of \$2175 (P.O.E., N.Y.) includes ALL this: sliding sun-roof, whitewall or Michelin "X" tires, heater-defroster, economy 4th gear, windshield washers, dashboard clock and reclining "sleep-on" seats.

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SPOTLIGHT

ON

DETROIT

by Bill Callahan Detroit Editor

LETDOWN IN AUTOMOBILE production in Detroit has brought a plethora of panaceas to get things back on the beam. Some are as silly as suggesting to a quail hunter that he shoot his dog to flush the covey; other are sound. Best of the bunch is the idea now being considered in Washington (and may already be law when you read this) to attach the manufacturer's suggested delivered price to the windshield of every car leaving a plant. This listing would show the equipment included in the price, and the removal or revision of the suggested price tag would be illegal.

ALL FACTORIES and the majority of dealers have endorsed this move, which would certainly go a long way toward removing the hocus-pocus that has been a bugaboo to car buyers since World War II. The new price does not necessarily mean that a car buyer can plunk down the amount shown on the windshield sticker and walk away with the car, but it will give him a starting point in dealing that up to now has been absent.

UP TO WORLD WAR II the industry as a whole listed "FOB Detroit" prices in national ads. The Detroit basing point was used because of shipping and tax cost variables in localities. Under the anti-trust laws factories were not, and are not now, permitted to fix selling prices for products; they may suggest delivered prices. After World War II, when buyers were dashing down the street waving wads of money and asking to be "taken," dealers reverted to the pernicious practice of price "packing." This meant hiking the price by extra costs and offering big come-on dis-

counts. Factories went along with the gag by dropping all reference to prices from their advertising.

WITH NO FORM OF PRICE orientation for the past several years, the automobile market has been more chaotic than the building boom at Babel. Lured by big bargain offers, buyers soon wondered where the discount went when they got home and checked the contract.

BUOYED BY A HEAVY postwar demand and bulging bankrolls, this practice flourished in the late '40s and early '50s. Fear of being cut off from a new car supply when the Korean War started brought a new crop of buyers into the market who were able and willing to pay. In 1955, bamboozling sales practices netted the industry a record year but by 1956 they were beginning to boomerang. It was evident in 1957 that buyers were becoming increasingly wary and this year their wariness has amounted almost to boycott.

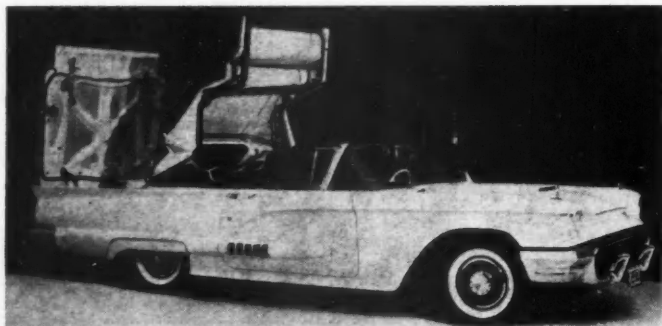
THERE WAS EVIDENCE in recent hearings in Washington that while the companies in the industry do not enter into collusive agreements to fix prices, the price one maker can get just about determines the asking price for similar cars in that bracket. One company representative stated that his company had underestimated the price to be asked by a competitor, basing its thinking on the fact that the competitor had made fewer changes in its new models. On this basis his company had held its prices low to meet the expected lower competitive price. However, when the competitor announced prices higher than his company's, his company increased its price—which looks like following the "market will bear" system. If the initial price was based upon a fair operating return on

anticipated sales, the increase seems unjustifiable.

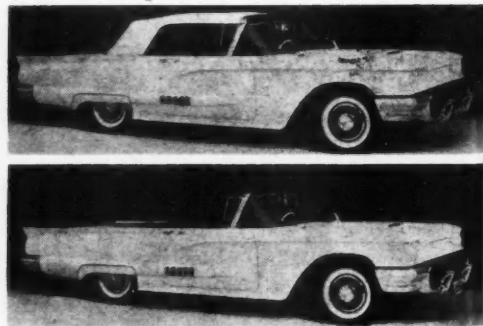
PRESENT SIGNS POINT to higher prices for 1959 because current labor negotiations are not likely to result in lower wage rates; there will be increased fringe benefits, to say the least. Then, too, since profit-per-unit price must be projected on the basis of anticipated sales, and in view of the current muddled sales trends, makers will have to arrive at such projections with caution. If wages rise in the automotive industry, outside purchase prices also will rise. Even if the talked-of elimination or revision of the excise tax on cars becomes reality, the reduction will apply to manufacturers' cost and not to the total "suggested" price. Faced with tremendous expenditures for model changes, makers will play it safe pricewise.

BUT, THE BIG GAIN is that buyers will know what the suggested price is and will know that as soon as the car reaches the dealer, because the price must be affixed to the windshield at the factory.

HAROLD CHURCHILL, President of Studebaker-Packard, put the cat among the pigeons recently when he announced to stockholders a plan to add a small car to S-P's 1959 lines—and rumors are rife that he said *small car*, he meant just that and not a stripped-down version similar to the Scotsman. The car will be shorter and narrower but will combine interior roominess with attractive new design which probably will not be greatly modified from year to year. No wheelbase figures are available, but since my information is that both six-cylinder and V8 powerplants will be available, I wouldn't expect to see the



THUNDERBIRD CONVERTIBLE uses same basic principle as Ford's retractable hardtop. T-Bird's soft-top folds into



luggage compartment; deck lid is lowered manually. Elimination of stowage "well" gives full-width rear seat.

Law requiring posting of factory-suggested prices on all cars could help sales....
Studebaker-Packard plans all-new small car....Sun Oil Co. now blends gasoline to suit
octane requirements of individual cars....Ford retractable hardtops prove popular
....Sales of non-slip differentials on increase....Industry proves interest in
safety to state governors....Research on control systems, anti-collision devices

wheelbase much shorter than the Rambler's 108 inches, if that. The six-cylinder engine will likely be an improvement on the designs of the earlier Studebaker Six which set some outstanding economy records not far back. There will be more than one body style offered but there is no hint that unitized construction will be used.

"AMERICAN CAR OWNERS will spend \$550 million this year for excess octane quality their cars cannot use," G. B. Wreith of Sun Oil Company told members of the press at a luncheon in Detroit recently. Wreith pointed out that using fuel of higher octane rating than the engine can use efficiently adds

a dial on the pump which controls the flow of gasoline and concentrate in prescribed proportions.

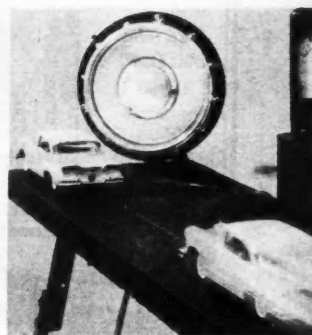
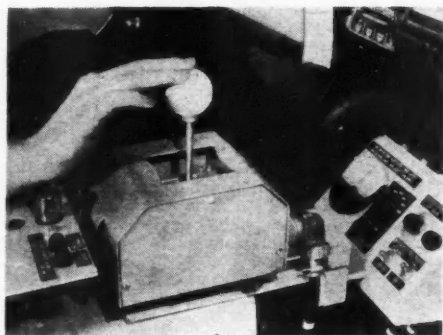
PRICE PER GALLON is automatically computed dependent upon percentage of concentrate added. Proper blend to use is indicated when engine performs smoothly without ping or spark knock. Sun recommends using lowest blend number that accomplishes this.

FORD MOTOR CO. REPORTS it has sold 27,000 convertibles with retractable hardtops since the model was introduced in April, 1957. Another innovation that seems to be catching on is the non-slip differential offered last Decem-

the major companies spend more money annually on safety research than any individual state.

WHAT THE INDUSTRY is doing to learn how to protect car occupants from death or injury in event of accident was graphically illustrated at the proving grounds by rolling cars over at high speed, crashing cars into cars or fixed objects at high speeds, and snatching cars to a quick stop with a hydraulic snubber. The cars in each case were manned by articulated dummies designed to react as closely as possible to a human body.

TO IMPROVE DRIVER control it is likely that a modified tiller will one day re-



STEERING TILLER being researched by GM (left) offers "joy-stick" control. Ford's version (center) also has auto-

matic transmission lever in dash. Model Edsels (right) demonstrate warning device to curtail rear-end crashes.

nothing to performance but does add to cost. He said compression ratios in engines now in use range from 6.5 to 1 for some earlier models to 10.5 to 1 for some 1958 lines.

OF EQUAL IMPORTANCE is the fact that octane requirements of two engines of the same make and model may vary as much as six octane points. This is due to tolerances allowed in combustion chamber finishing, ignition setting, etc. Compression ratios will vary among the same engines in service due to build-up of deposits in the combustion chambers under varying operating conditions.

SUN'S ANSWER is a special pump which blends the fuel right in the filler hose nozzle and provides an octane range from 94 to 102. The pump presently provides six blends numbered from 200 to 260. Blend 200 is 94 octane and this rating is increased by blending additional quantities of a concentrated gasoline of about 105 octane rating. The blending is done automatically by setting

ber on the Chrysler Imperial. Demand for this unit has risen from 17.7 per cent of cars ordered at that time to 39.7 per cent of the cars sold in March this year. In this same "claims" department, pointing up another possible trend, is a report from Chevrolet that the all-white or ivory convertible sales for the first six months of its 1958 model production are only one percentage point behind black demand. Black was 20%, white 19%, with silver blue and red running third and fourth respectively.

AUTOMOTIVE LEADERS met in Detroit with members of the Governor's Committee on Highway Safety and demonstrated to these representatives of the people that the automobile industry is as interested as anyone in the problem of highway safety. The governors toured Ford and GM proving grounds and Chrysler engineering laboratories. Time did not permit visits to Studebaker-Packard (South Bend, Ind.) and American Motors (Kenosha, Wis.). The governors were impressed by the fact that

place the steering wheel. Various types of this device, which are under study at all plants, were shown. The control lever is a small device similar to the "joy" stick of an airplane. To accelerate, the driver pushes the stick forward. To apply brakes, the stick is pulled backward. Lateral direction of the car is controlled by moving the stick right or left. This device would enable the driver to react more rapidly. Should he fall asleep, the car will coast to a stop in a straight course.

AMONG OTHER MAJOR research projects shown the committee was a warning light system mounted in two miniature Edsels. Incorporating a photo-electric cell principle and a computer, the device flashes the brake lights of one car automatically when a vehicle approaches rapidly from the rear at a speed that might cause a collision. In its present form the system works only at night because the computer operates on the strength of approaching headlight beams.

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From Our Readers' Sketchpads



CUSTOM RANCHERO

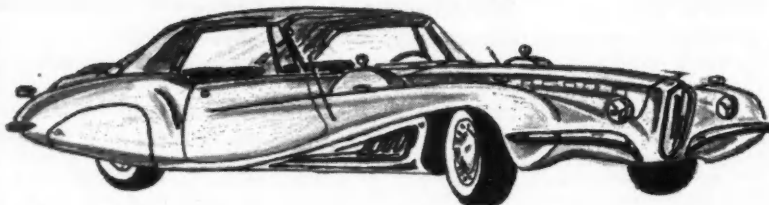
Here is a drawing of a customized Ford Ranchero, which, in my opinion, would make an ideal inexpensive custom. The cab, bed and trim will retain stock Ford Ranchero parts and the front fenders, grille, bumpers and hood possibly could come from a 1958

Edsel Ranger or Pacer.

As for the engine, I believe the 1958 Mercury 400-horsepower Super Marauder and overdrive transmission with Mercury limited-slip rear end would complete the package.

John Paul Ortmann

Toledo, Ohio



REVIVE THE CLASSICS?

This classic design started out as a jest against the "revive the classic" school of thought. The finished product, however, seems to me an interesting study.

I tried to design every known stereotype

of that era into the car. It is a low car with a long wheelbase, to achieve a racy thoroughbred look. It seats two people on a 117-inch wheelbase and is 50 inches high.

John Mojek

Dearborn, Mich.

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Low	Plymouth Belvedere	20.0	48.3
Low Medium	Oldsmobile "88"	19.2	50.5
Upper Medium	Chrysler New Yorker	21.0	58.4
High	*Imperial Crown	20.5	62.7

(Winners determined on basis of highest ton-mile per gallon. Ton-miles is the mileage performance in relation to weight of car.)

*SWEEPSTAKES WINNER...IMPERIAL CROWN



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BEST MILEAGE BY MAKE

In the 1958 Mobilgas Economy Run, 29 new stock cars powered by '58 Mobilgas Special were driven over a tough 1883-mile course from Los Angeles to Galveston. Through traffic, across deserts, over mountains, from below sea level to 7540 feet, at maximum legal speeds up to 65 mph. This rugged test of cars, drivers and gasoline was carefully supervised by United States Auto Club officials.

Result: top performance, top mileage.

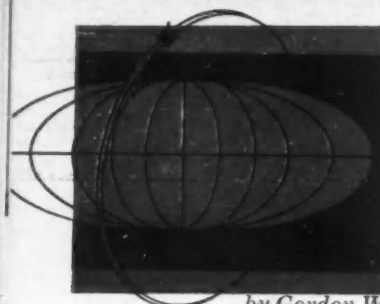
For proven performance and top mileage, fill your tank with powerful '58 Mobilgas Special.

Make	Actual MPG	Ton MPG
Buick	17.6	47.9
Chevrolet 6	20.6	47.0
Chevrolet 8	18.7	44.3
Chrysler	21.0	58.4
Continental	18.0	55.8
DeSoto	19.6	51.9
Dodge	17.8	44.2
Edsel	19.2	48.9
Ford 6	20.8	46.2
Ford 8	19.7	46.8
Imperial	20.5	62.7
Mercury	18.8	51.0
Oldsmobile	19.2	50.5
Plymouth	20.0	48.3
Pontiac	18.8	48.3
Studebaker	19.2	43.3

THE RUN THEY FOLLOWED

The Mobilgas Economy Run—an official test of cars competing against other cars in the same price class—is sponsored annually by General Petroleum, far west affiliate of Socony Mobil, as a public service to motorists.





WORLD

European car builders move to
stifle competition....Proctor
is newest Australian car....
Land Rover announces more power

by Gordon Wilkins *European Editor*

THE DAIMLER-BENZ purchase of controlling interest in Auto-Union, reported here last month, appears to be only the beginning of new combinations, secret or overt, which are steps toward a European common market. Faced with the decision of whether to fight competitors or come to terms with them, heads of leading independent factories in France and Germany are adopting the latter course. Far-reaching agreements for division of markets and avoidance of competitive models are currently being drafted.

Fiat, who controlled Simca before World War II, have resumed close technical collaboration, assigning top Fiat engineers to Simca in Paris. Ford is said to have a 17 per cent interest in Simca following absorption of the French Ford factory by Simca. Another agreement gives Peugeot the right to use Renault distribution facilities in the United States.

Impetus is given these moves by the startling success of American penetration into the European motor industry. Ford and General Motors factories in Britain and Europe have been particularly successful in grabbing huge chunks of the available market. Last year, for example, English Ford and GM's Vauxhall achieved 73 per cent of all British sales in Belgium and nearly 50 per cent in Sweden. In Germany, GM's Opel is engaged in all-out battle with Volkswagen and virtually equals their sales in most European countries. Little wonder that some European car builders feel that the time has come to join forces for mutual protection.

AUSTRALIA

Newest auto to appear "down under" is the Proctor, a Volkswagen-based Fiberglass coupe. At a delivered price of \$2100—only \$200 more than the standard VW

in Australia—the car promises to be a hot seller in the limited production field. Within three weeks after builder Ted Proctor introduced his prototype he received 25 orders.

Handling and performance are greatly improved over the standard Volkswagen. Better streamlining and cutting 300 pounds from the stock VW weight make for lively acceleration, 75 mph top speed and economy which exceeds 40 mpg for normal driving.

The giant British Motor Corp. has just launched two new models in the Australian market, the Austin Lancer and Morris Major. Both cars are developed from the Wolseley 1500, powered by a four-cylinder, 50-bhp engine which is also the basis for the MG-A powerplant.

The Morris Major is announced as a "big brother of the Morris Minor." There are no plans for exporting cars to the United States.

BRITAIN

Latest innovation from Rootes Motors is an air-conditioning unit for the Hillman Minx and Sunbeam Rapier. The unit is now available for only \$275, completely installed. This means a fully air-conditioned family-size sedan for under \$2000 when it is mounted in the Hillman Special four-door, which retails for \$1699. There is said to be no sacrifice of economy or performance with the unit, which fits neatly into the trunk of the car.

Newest version of the go-anywhere Land Rover, the Series II with 109-inch wheelbase, is powered by a 2¼-liter, 77-bhp engine, nearly 50 per cent more power than the previous model. In trying the car over road and cross-country courses

it is apparent that a quick switch into four-wheel drive will allow the worst possible terrain to be covered with ease. The cab is extremely comfortable with adjustable seats and well-spaced pendant pedals. Plenty of glass all around insures excellent visibility, while detachable seats in the open rear section allow for extra passengers on an emergency basis. The Land Rover's popularity is attested to through over 200,000 built in the last 10 years. Of these, nearly 75 per cent have been exported to over 150 different countries.

Prince Philip, the Duke of Edinburgh, apparently likes the products of the David Brown Co. very much, for he has given Aston-Martin, Lagonda, Ltd., one of its subsidiaries, the honor of his Royal Warrant of Appointment, which means that they can display his personal coat of arms. In addition, they may add to their company stationery a line saying, "Motorcar Manufacturers By Appointment to His Royal Highness."

Rootes Group are closing the Singer factory, where Sir William Rootes served his apprenticeship. They have decided that it is unsuitable for car manufacture and have transferred production to the main plant at Ryton. The Rapier engine is now offered as an option to the Singer overhead cam unit.

A new lightweight diesel engine which develops 43 bhp from 99 cubic inches has been introduced by F. Perkins, Ltd. The engine is particularly adaptable to taxis and tests of more than one million road miles have proven its reliability and economy. Adaptor kits allow installation in virtually any car manufactured in Britain and Europe. The slightly larger P-4



AUSTRALIA'S newest is the Proctor, handsome Volkswagen-based "glass" coupe.

in improved model....Rootes closes Singer factory....Journalists barred from French Montlhéry test track....Ferrari introduces new sports racing car, the Dino 206....Milan to Moscow rally will cover 3400 miles in August....Maserati in receivership....Russians plan Grand Prix car....Goggomobil abandons front-wheel drive....



LATEST FERRARI, the Dino 206, is powered by a two-liter V6 engine developing 221 bhp at 9000 rpm. Car, said

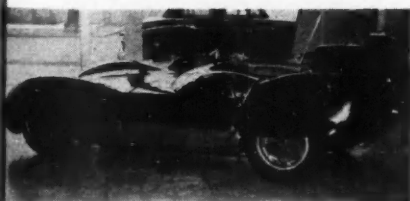


by Peter Collins to be very fast, made its debut at Goodwood, England, placed second to 3.9-liter Aston.

diesel has been installed on three Fleetway Cabs in Baltimore, Md., and fuel consumption has been cut in half.

The 10th running of the *Daily Express* Trophy Race at Silverstone was won by Peter Collins in the factory Ferrari. Collins, first driver to win it twice, was 24 seconds ahead of Roy Salvadori (Cooper) while Kansas City's Masten Gregory was third in a Maserati and Jean Behra (BRM) was fourth.

Stirling Moss in a Cooper was plagued with bad luck. His engine stalled at the start and he got away dead last from a front row position. After 13 laps he had climbed to sixth place but was forced out at 20 laps with a broken gearbox.



LOTUS 15, newly designed, may be this year's dark horse at Le Mans.

Collins and Behra each set identical lap records at 105.37 mph for the 2.92-mile course.

The 25-lap race for sports cars over 1500cc took on added significance as a practice outing for several Le Mans cars including the new Aston-Martin DBR-3/300, the Ferrari Dino 206 and the Lotus 15. While the event was won by

Masten Gregory in the *Ecurie Ecosse* Lister-Jaguar there was a strong indication that the Lotus 15 will be the car to watch at Le Mans. With Allison at the wheel, the car equalled Moss's time in the Aston-Martin. For the 24-hour event the Lotus will be fitted with the new 2.2-liter Coventry-Climax engine in place of the 1960cc unit currently running. This will make it a serious contender not only for the Index of Performance but for outright victory.

FRANCE

Journalists have been barred from the famed Montlhéry track near Paris. French industry, which uses the track for testing, alleges pressmen are a nuisance, but French press testers bitterly suggest industry top brass has been stung by road test criticism. Ban will hit your reporter who has regularly used Montlhéry for years in the absence of a suitable test ground in England. A compromise with the track management is hoped for.

GERMANY

A severe winter test of the Goggomobil T-600 has led the designers to abandon the front-wheel drive. When the car goes into production in July it will have the flat twin air-cooled engine hung ahead of the front wheels, but the drive will be taken via a four-speed all-synchromesh gearbox to the rear wheels. Engineers concluded that rear drive gives the safest handling on slippery roads and steep grades but they retain the front engine on grounds of stability and greater luggage room. Currently over 40 cars a day, representing more than 20 per cent

of the total plant production, are exported.

ITALY

No Ferrari ever remains "the latest" for long. Even as the three-liter V-12 Testa Rossa was busy winning at Buenos Aires and Sebring, the factory was busy with the prototype of the new two-liter, V6 Dino 206, which took second behind Stirling Moss's Aston-Martin at the Goodwood Easter meet. It appears that the compact, rigid V6 is now Ferrari's favorite engine. First version was 1½-liters for Formula II. It was enlarged to 2.4-liters for Formula I.

The new Dino sports car has a space frame of large and small diameter tubes. Front suspension is by coil springs and wishbones with anti-roll bar. The rear carries a normal rigid axle on twin parallel radius arms, a transverse Panhard rod and coil springs. Total weight, a scant 1495 pounds, coupled with 221 bhp at 9000 rpm, gives a potent ratio of 6.8 pounds per bhp.

The Dino marks a change in type names and number designations for Ferrari. Dino is in memory of Enzo Ferrari's son, Alfredo. The first two numbers now denote the cylinder capacity in liters and fractions and the third number gives the total number of cylinders.

The Italian Sporting Commission has now authorized advertising on Sports Racing and Gran Turismo cars in national and international events in Italy. This follows the much criticized spaghetti ads on cars in last year's Mille Miglia. Size of ads is limited, only one product

continued on page 73
MOTOR TREND/JULY 1958 17

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**Also acceleration in
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The new racing novel *Twenty-Four Hours at Le Mans* by J. A. Gregoire is one of, if not the best fiction yet derived from racing. The author is a solid member of the racing fraternity, having driven the Le Mans circuit four consecutive years during the '20s in a Tracta—taking first in class twice. He is better known to the younger generation as inventor of the first French gas turbine record car, the Hotchkiss-Gregoire automobile, and the engineer who pioneered the front-wheel drive used in the Citroën and the Dyna Panhard.

With this broad background in the field of automobiles and racing, Mr. Gregoire's novel reads more like an exciting description of fact. Except for the "Maller" turbo car and its assorted crew and hangers-on, most of the characters and marques in the book are prominent in racing. The hero, Roger Giraud and his Grand Prix turbo-car have a tremendous 24-hour dice with Maseratis, Jaguars, Ferraris, Panhards, Gordinis, Cunninghams and Aston-Martins, jockeying for position against such drivers as Stirling Moss, Jose Gonzales, Briggs Cunningham and Tony Rolt.

The technical descriptions of the turbo-car and its operation are eye-poppers. Mr. Gregoire has faced up to the serious shortcomings of turbine racing and provided logical solutions for his big blue "Maller."

Although some of the flashbacks and petty politics drag here and there, *Twenty-Four Hours at Le Mans* contains some of the best racing action ever written. Published in the U.S. by the John Day Co., 121 Sixth Ave., New York. \$3.50.

Two new books in the Modern Sports Cars Series, *Guide to Competition Driving* and *Sports Cars of the World*, are the latest additions to attract the sports car fan. *Competition Driving*, by leading American driver Paul O'Shea, is crammed with 126 pages of information and photos of value to anyone who drives a fast automobile. While primarily intended for the driver wishing to develop competition skill, the chapters contain much food for thought for the expert as well.

Sports Cars of the World, by driver-photographer Robert Halmi, contains 127 profusely illustrated pages covering all true sports cars in production, here and abroad. A chart with prices, performance data, specifications and distributors is included.

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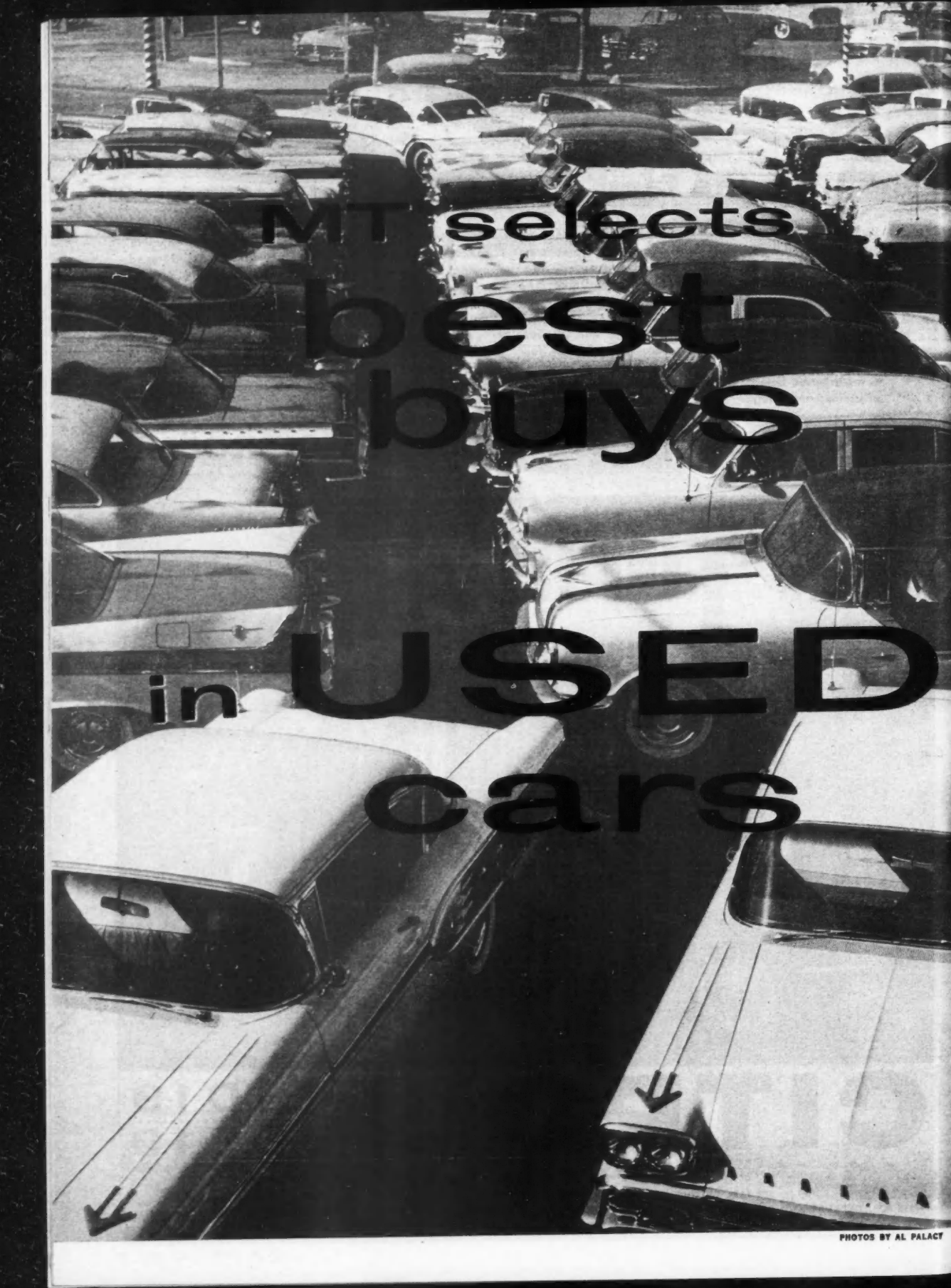
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MOTOR TREND/JULY 1958 19



NIT selects best buys in USED cars

PHOTOS BY AL PALACT

KICKING TIRES, popping the hood and 'round-the-block road testing are fine methods of impressing your girl, but when it comes to buying used cars, a sharp pencil and pad of paper will save a lot of money for something else besides wheels. Mechanical faults are fixable. But make a mistake in finances and every month you'll be reminded of the folly of paying too much for a car, or owning a chunk of iron that is depreciating faster than the payments you can make on it.

The true test of any car's value is what it sells for on the used car market. Here is where dollars talk—not advertising claims, factory rebates to volume dealers, nor chromed horsepower under the hood. A popular car is always worth more than some other chariot which failed to attain public approval.

Cars in good condition are often the best buys, not only because they require no immediate outlay for repairs but also because they have usually been treated rather well. Of course, you may find one in unbelievably good condition. Then beware, for it may have been a beaten-up world traveler that was young enough to justify a \$350 cleanup. But underneath, no matter what the age, it's still a tired chunk of iron in sad need of some nice old lady who drives only to church on Sunday.

Rough cars can be a good buy, once in a while. Perhaps your brother-in-law can replace tires at cost. Or Uncle Joe will overhaul the engine for free. But unless you have more connections than a hot water heater, or are a professional mechanic, leave the doubtful stuff to someone else. Buy the best you can find, which leaves the least to worry about.

Owning a car you can't afford to fix could also be a real headache. Right now a 1955 Buick sells for less than a 1955 Chevrolet. But when you buy the first set of tires (and a battery later on) cost of the Buick will skyrocket past the cost of the Chevrolet. Now consider the difference between their potential gas mileage. Is the Buick still a better buy because it cost less?

Or take the case of a 1957 Oldsmobile Super 88 and an Olds 98. On used car lots these Olds sell within \$200 of each other. But the 98 is 8.5 inches longer than an 88. Would it fit your garage? The 98 also falls into a different insurance classification and costs more to insure. If you're thinking of moving to "the best" for just \$200, keep in mind that you may spend triple that 200 during the first year of

few more dollars out of your pocket (for depreciation) to have driven a 1955 DeSoto or Olds 88 than it would have cost to have driven a 1955 Ford during our charted three years. (See page 22 for charts.)

Or you could have driven a 1955 Cadillac or Imperial for three years for \$295 more than a Packard. A 1955 Chrysler Windsor for \$80 less than a 1955 Pontiac. A Dodge for \$180 less than a Buick. Spread over the three-year ownership period we surveyed, these amounts may not seem like much, but you might just as well put your money where it will do the most good and enjoy what's left over.

The importance of body style, model and optional equipment cannot be overestimated. We used four-door sedans to create the graphic information on these pages, but hardtops would have depreciated less than our sedans. Two-doors would have dropped a slightly greater proportion of their cost over the years. Convertibles hold their value well for the first two years, then the interior begins to go and they skid right down to the bottom of the heap in percentage of original cost retained in the package.

Options are important too, on a used car. Most new cars are loaded, and used car buyers are so teased by auto advertising that they too want all the goodies in their four-year-old. So if you don't have an automatic transmission or power steering the value of your car will drop faster than identical models equipped with these more or less standard options.

NO-ONE, BUT NO-ONE, is sharper in the purchase of automobiles than managers of the huge fleets used by salesmen and business executives. A recent editorial in *Fleet News*, a publication of Lee Fleet Management, Inc., outlined the business-like approach to buying cars. They said, "Every purchaser of a car is a speculator in the used car market . . . as anyone who has ever bought one of the less popular cars has learned when he tried to trade his car. For this reason dollar investment should be of secondary importance to estimated depreciation cost when considering which models to buy . . . The use of hardtop models can well be recommended because it is expected they will bring back their additional cost in the used car market. Standard models . . . six-cylinder engines are becoming a thing of the past. Radios, two-tone paint and windshield washers are now considered required equipment . . . each of these items creates no additional depreciation cost because they add more than their original extra cost to the value of a used car. Although automatic transmissions still represent a depreciation loss of about \$50, their use is recommended because of the constantly increasing maintenance expense required on regular transmissions."

All this pretty much adds up to, "Buy a car today that will sell well tomorrow." Earlier we pointed up the value of a sharp pencil, used before buying a car. Use it. Decide what you would like to have to suit your needs. Then decide how much to put down (or trade the present car) and what monthly payments can be made without cutting off your mad money. Finally start out to buy a car that will cost you the least to own, and will be the easiest to sell when you're finished with it. Colors can be changed, tires replaced, interiors cleaned—but a bad deal takes a long time to die.

About the last thing to do before crossing a used car line, or opening the door to a shiny salesroom, is to stop for a cup of calming coffee. Sit down, relax and spend 10 minutes telling yourself, "No one is going to SELL me a car, I'm going to BUY one."

When you hit the first salesman, relax some more for he is going all-out to SELL you the car they've had the longest, SELL you the most profitable car, SELL you the car with the biggest commission, or SELL you on the idea of sacrificing your trade-in because he is "giving you such a good deal."

Your best buy in a used car is the car *you* buy, not the clunker someone *sells* you.

continued

and tells why

ownership. Not to mention that when the 98 and 88 are four years old they'll probably sell for exactly the same amount of money when you unload.

Then there is the matter of repairs. Not only the cost—but the frequency. One of our local Chrysler-Plymouth dealers checked customer repair records for the past five years and discovered that his shop had not pulled the heads off one engine. Sure, they had serviced a few new cars with bum valves, as has every dealer of every make . . . and exchanged engines for a lot of customers. But Chrysler-built V8s just hadn't required much valve service. By contrast a competitive dealer, operating a similar size shop, had head removal orders scattered like wheat through his repair files. Here's where friendly owners of the make you're buying can be of help. Find out how much they spend on repairs and how often. A lot of money goes down the repair drain, as unhappy owners of a poorly braked popular car can testify.

Before finally deciding what—and how much—to spend for it, take a good hard look at something better; not bigger—better or newer. For example: It would have cost just a

MT Selects Best Buys in Used Cars *continued*

UNLIKE MOST DISPLAYS of used car values, our graphs carry no dollar signs, nor consider the original price of new cars. The first were omitted because dollar differences in used cars often disguise their true value. In turn, prices of new cars are subject to great pressure. An eager dealer might add several hundred dollars to the factory price so he could discount the same dollars and hope you think his deal is better. One may give fair value for your trade-in; another will talk you into accepting less than fair market value. But this quicksand of price and counter-price becomes rock-hard when like-new models hit the used car lots. There, a popular car costs more than an unpopular car, regardless of the original price.

For our charts we selected 1955 four-door sedans or wagons as priced on used car lots in the first four months of 1955.

They were equipped with an automatic transmission, power brakes and steering, radio and heater. Exceptions are the "Four . . . and Seven Year Old" charts (see page 62), which consider only a radio and heater in their percentage data. Those makes omitted from the graphs depreciated at a rate nearly identical to listed cars from the same corporation.

Each make was charted at 100 per cent in 1955, no matter whether it sold (as a used car) for \$2000 or \$5000. We kept in mind that if two cars sold for the same price, the make depreciating faster costs more dollars out of pocket. On the other hand a cheap car can depreciate faster than a more expensive model, yet end up costing fewer dollars over a three-year period.

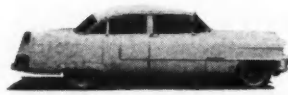
Using the charts is easy. Select a price class or body style



'55 Chevrolet 150



'55 Oldsmobile 88



'55 Cadillac 62

LOW-PRICED CARS

Over the long run it doesn't seem to make much difference which of the low-priced three (Ford, Chevrolet, Plymouth) you buy. They depreciate at almost the same rate. We checked the lowest-priced four-door sedans with radio, heater, power steering and automatic transmission.

Buying the car used, and driving it three years, cost over half the money invested in any make. And because they sold for within a few dollars of each other (\$2260 to \$2400), the actual dollar cost of each car was nearly the same.

Bought used in the year of manufacture, or the year after, any of the three is a good buy. In following years Chevrolet is a slightly better buy if you are going to resell or trade within a short time. However, for long-term transportation Ford and Plymouth become better buys as they have depreciated slightly more than Chevrolet, and can be bought for fewer dollars. But four or five years later a Chevy will still return the greatest percentage of your original cost.

MEDIUM-PRICED CARS

The first two years with medium-priced cars (except Pontiac) would have cost about the same percentage of investment. Only during the third year did they split into divisions which have Oldsmobile depreciating less, and costing only a few dollars more to own than Ford, Chevrolet or Plymouth.

Pontiac and Buick fail to fit any preconceived notion of depreciation percentages. Pontiac slumped the first year out, fell at the same rate as other cars during a second year, then retained value better than any during its third year. Buick stayed with the group during the first two years then dropped badly in its third. Pontiac and Buick cost their owners the greatest percentage of initial price and more dollars out of pocket (\$340 and \$270 respectively) than Olds.

Long-term transportation buyers of '55 and '56 models should check Buick and Pontiac, which have depreciated the most and therefore cost fewer dollars. On the other hand, buys in '57 models would be faster-depreciating Chrysler and Olds.

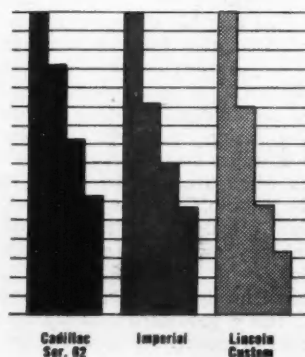
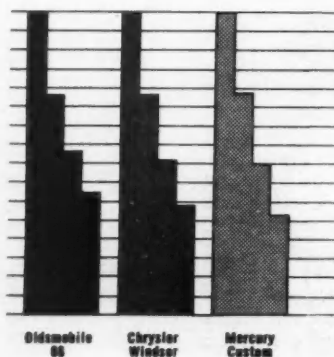
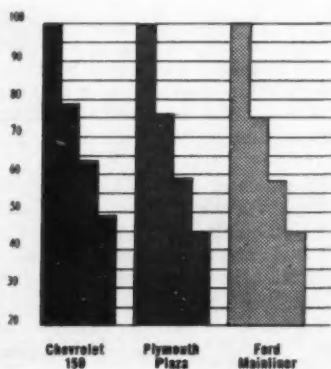
LUXURY-PRICED CARS

Running against current depreciation rates are Cadillac with its 49 per cent depreciation being better than many, and Imperial's 53 per cent figure in the middle of the Ford-Chevrolet-Plymouth rate. Only Lincoln sags badly. However, depreciation percentages are not the full story, for the actual dollar cost between cars is small. Lincoln calls for a smaller initial investment (\$730 less than Caddy), and during three years costs only \$190 more than a Cadillac.

The importance of public fancy to car values is underscored by checking 1957 models, the year of an all-new Imperial. After one year Imperial shows nearly the same depreciation (19 per cent) as Cadillac (16 per cent). But the 1957 Lincoln was merely a warmed-over earlier model, and accordingly dropped 25 per cent in the first year.

To drive the most car for the least dollar investment, buy a Lincoln. To drive the car worth most when you trade it, buy a Cadillac. To drive the middle road, an Imperial makes sense.

THREE-YEAR DEPRECIATION (1955-1958)



of car suitable for your needs. If planning the purchase of a nearly-new car in the same year it was made (i.e., a 1958 in '58), select the make with the lowest percentage of depreciation. Going to sell in a year? Pick the most popular model of the most popular car (Rambler), for it is most likely to retain the largest proportion of your investment.

One-year-old cars (i.e., a 1957 in '58) call for a slightly different approach. Should you plan to drive the car three or four years, consider that model which has depreciated most during its first year. For it will cost you fewer dollars in relationship to value left in it, and is not likely to depreciate any more rapidly than other cars of its price class. Corvette (which dropped way below Thunderbird the first year) is a good example of this type of buy in a used car.

When first cost is most important, buy the car which has already depreciated most (as long as it is not an orphan) as it will require fewer dollars to purchase and is not likely to depreciate faster than others of its class. Plymouth wagons (1957 on sale in '58) are this type of good buy.

Luxury car buyers might also consider the car which has depreciated most. It will cost fewer dollars to buy, yet has just as many miles left (assuming equal condition) as a more popular car costing several hundreds of dollars more. Lincoln is a good example of lush transportation for minimum dollars.

In all figuring, percentage of depreciation as charted here is most important when related to the number of dollars invested in a car. For example: The rapidly depreciating Lincoln lost only \$190 more than a Cadillac during our three-year ownership period, because (though it depreciated faster) it cost \$730 less to buy in the first place. On the other hand, Ford and Plymouth lost exactly 55 per cent of their purchase price after three years of use. But a used 1955 Ford cost more than a used 1955 Plymouth, so the Ford owner was \$70 poorer than the Plymouth owner when 1958 trade time arrived.

Though our charts are based on 1955 cars, trends shown are similar for 1957's on sale in 1958, except for the differences mentioned in each section.

(FOR MORE SELECTIONS OF BEST USED CAR BUYS . . . SEE PAGE 62)



'55 Rambler

THE INDEPENDENTS

Don't let this chart fool you! Rambler is the best buy in a sedan. It cost fewer dollars (\$830) than any other car. But Studebaker, even though it lost a greater percentage of its purchase price, actually cost about the same number of dollars (\$1395) as did Ford (\$1330) during the same period. What happens to orphans is graphically illustrated by plummeting losses of Kaiser and Willys sedans. They both sell for \$725 in 1958, but Kaiser sold for \$2885 and Willys \$1990 in 1955. That's over \$2000 lost in three years of Kaiser ownership.

Best buy on the used car market definitely seems to be Rambler. It costs little (a 1955 retails for \$1100) and depreciates more slowly than any American sedan. Another good buy is a three-year-old Studebaker, which has lost over half its value, yet still retains many miles of good transportation. Less expensive, but difficult to sell, would be Willys and Kaiser. They are good only if you can steal them for hundreds under the market price and drive them to death.



'55 Rambler Cross Country

SMALL WAGONS

When bought in 1955 there was slightly over \$300 difference in prices of these four station wagons, but by 1958 depreciation had spread them almost \$450 apart. Rambler cost least to begin with, depreciated more slowly and cost fewer dollars to own. Chevrolet, Ford and Plymouth sold within \$65 of each other in 1955. By the time they hit 1958, the cost of ownership spread was \$220.

No matter which you bought, depreciation was fairly even the first two years of ownership, with differences in value not splitting until the third year when Ford dropped from first to third place in one year. There are more Ford wagons on the road than any others, and because the purchase of a used wagon is often based on a desire to drive something different (while satisfying a need for more space), customer's choice shifted to less-common Chevrolets and Ramblers.

If you're shooting for a used wagon, bought in the same year of its manufacture, a Rambler or Ford seems to be the best bet for long-term transportation.



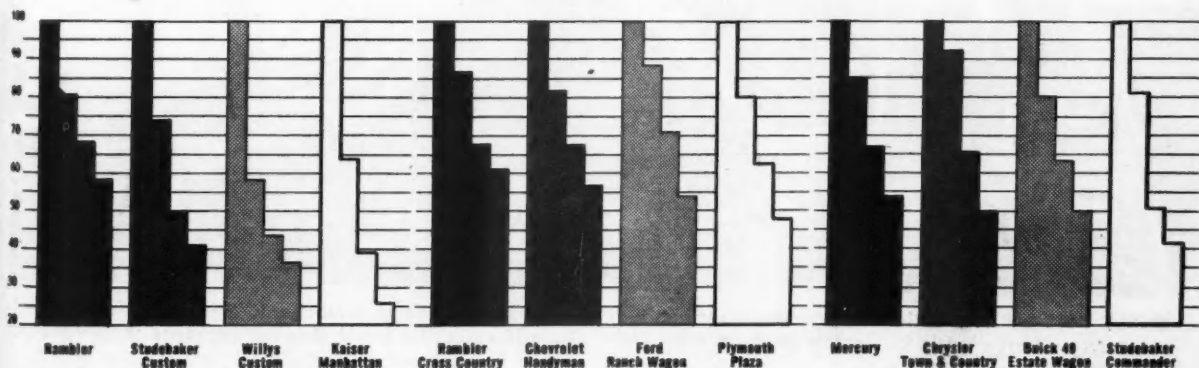
'55 Mercury

LARGE WAGONS

Where big wagons fit into the picture is puzzling. Often nothing more than "gussied" models of the corporation's small wagons, mounted on a longer wheelbase, they have such lush interiors that it's almost tragic to haul even a mother-in-law in the back seat. In spite of this, the big handsome 1955 Chrysler wagon had tremendous appeal to 1956 buyers wanting something different. Accordingly it had the least percentage of depreciation of any wagon. By the second year all but Studebaker were depreciating at the same rate right on to 1958.

Mercury, perhaps because of its flashy trim and volume production, ended up the value buy. However, if you didn't care what percentage of your investment went down the drain, a Studebaker would have cost you fewer dollars than either Chrysler or Buick. After four years the depreciation pattern is fairly well set, so that a Studie can now be bought for a lot less than any of the others. If low first cost is important, check Stude. For low ownership cost, check Buick.

THREE-YEAR DEPRECIATION (1955-1958)



THUNDER



ROAD BLOCK PROVIDES AN EXCITING CRASH IN "THUNDER ROAD" WHEN STUNT DRIVER CAREY LOFTIN DRIVES RIGHT THROUGH. STRUCK

Here's the crash you'll see on the screen...

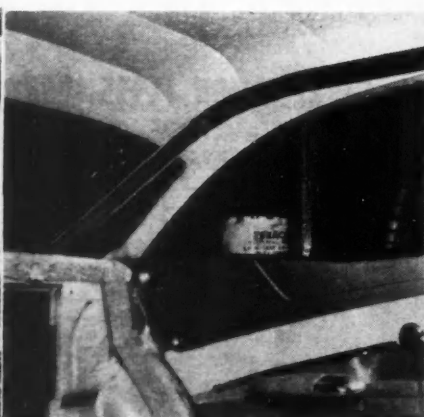
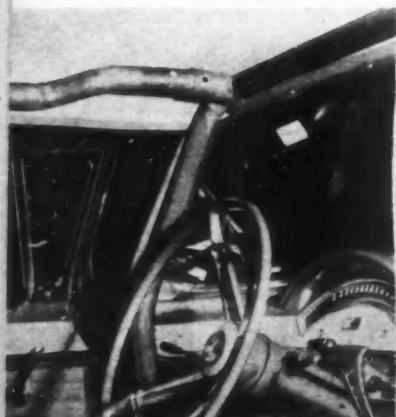
by Clarey Barbiaux

WHEN ROBERT MITCHUM decided to film *Thunder Road*, his own story of the illegal whiskey traffic in the southeastern section of the United States, he wanted the scenes of the hazardous transporting of "moonshine" by hopped-up cars to be spectacular. He also insisted that "the stunts be rigged so it'll be safe for everyone concerned."

Mitchum's first move to insure "spectacle with safety" was to hire one of Hollywood's top stunt men, Carey Loftin, to work out the details of each of the numerous "turn-arounds," "crash-throughs," and "flip-overs" called for in the script of the United Artists release.

The toughest stunt of the picture came when Robert Mitchum, as a "moonshine transporter," speeds along a deserted mountain road at night, wheels around a gradual curve and suddenly comes upon a barricade made of two cars set face-to-face in the middle of the road. In a split second he has to decide whether to stop and face the hi-jackers' guns or attempt to get through. Sporting daylight between the two cars he bends low over the wheel, presses the accelerator to the floor and heads for the opening. Hitting the cars at exactly the right angle, he crashes through. One of the cars goes hurtling off the road and into a stream alongside the

And here are safety measures behind the scene



SPECIAL ROLL BAR installation supports Ford roof so that stunt driver Carey Loftin can safely perform the preci-

sion crashes. (Right) Mechanic grinds reinforced widened bumper for break-through sequence shown above.

ON THE ROAD



STUCK



CARS ROLL BUT LOOSEENED HOOD ON LOFTIN'S CAR BLOCKS VISION. SPECIAL MARKERS AT ROADSIDE ENABLE SAFE ENDING.

highway. The second bounces crazily into the ditch on the opposite side. The "transporter's" car continues on down the highway, battered, with its hood buckled, partially obscuring the driver's vision.

When the cameras stopped turning, the car came to a halt, and stunt man Loftin, "doubling" for Mitchum in the scene, stepped out unharmed, and, seemingly, unruffled by the experience.

Authenticated by the files of the Alcohol and Tobacco Tax Division of the U.S. Treasury Department, the "break-through" was just one of the tricks employed by the still operators in getting their product "to market" over the winding mountain roads.

While preparing the picture in Hollywood, Mitchum and Loftin discovered that the script writers had chosen some truly exciting—but extremely difficult—maneuvers to be performed with a standard make automobile. Faced with the prospect of rolling a car off the road and over a waterfall, flipping another through the air into a bank of electrical transformers, performing a complete turn-around at 70 miles an hour, and, finally, blueprinting the previously mentioned break-through, Mitchum and Loftin headed for the location site of the picture, the rolling hills surrounding Asheville, N.C.

The pair spent four weeks in the area prior to the start of actual filming on *Thunder Road*, scouting the proper locations for each of the stunts, and equally important, assembling a staff of specialists whose job it would be to rig the cars so they'd look like any other standard make of the same style and vintage but with every possible safety measure installed to protect the driver.

Taking over a complete garage, Loftin supervised the installation of such safety features as complete steel pipe welded bracing throughout the interior of each car to give roll-over protection. Anything in the interior of the car that wasn't absolutely essential for performing the stunt was removed. Each of the cars was outfitted with a steel grab bar, installed at seat level on the passenger's side of the front seat. This seems a curious place to install the bar, but Loftin placed it there deliberately. "You don't have time to look for the bar in the middle of a planned, or unplanned turnover," he said. "I used to have the grab bar close at hand, until I



STAR ROBERT MITCHUM (r.) congratulates Carey Loftin after safe and successful high-speed crash and roll.

reached for it in a hurry and broke my thumb."

Current Loftin practice is to slide his right hand along the natural line where the seat and backrest come together. This not only leads him right to the grab bar but also forces him to stretch out along the seat, further immobilizing him so he won't bounce around too much. Stretching out in this fashion is quite a strain, because he always uses a double seat belt, an added precaution he was moved to adopt after a single belt once broke at a crucial time.

For the spectacular sequence covering the barricade break-through, Loftin had the mechanics fashion a heavy steel front bumper that would project a few inches beyond the sides of the car to take the major part of the impact when

continued on page 63



INTERIOR of Sprite is surprisingly roomy. Sports car theme is carried out in the bucket seats and floor shift.

by Gordon Wilkins
European Editor

REAR VIEW is clean and uncluttered. Removable top, waist high, offers good weather protection, headroom.



Blithe Sprite

Gordon Wilkins test drives the new

PROMINENT HEADLIGHTS and small oval grille give it the air of a small and friendly frog. A really small frog, for it is little more than knee-high. When I started my test run it was raining hard, but even with top erected it reached only waist level. You'd wonder how two full-sized adults could get in there at all, but they do, with quite a lot of comfort. Getting in was at least as easy as with some bigger sports cars I know and once inside there was ample space for my 5-foot-11 frame. There was room to stretch my legs and quite enough headroom. The two-spoked wheel is nicely placed, and far enough away so that one can swing it hard over in one sweep with arms fairly well extended.

Two good separate seats give reasonable lateral support and the backrests are wide enough, but I could have used a little more padding for the small of the back. Pedals are not too closely spaced; there is room to park the left foot off the clutch, and heel and toe can be used simultaneously on brake and accelerator. The gear lever lies under the hand on the high center tunnel, and alongside it is a big, practical pull-up handbrake. Even with weather protection erected the driver can see all four corners of the car and the wipers sweep a good area.

Grouped in front of the driver are speedometer with trip and total mileage computers, and tachometer with warning line at 5500, with dials for fuel, oil pressure and water temperature alongside. The ignition key fits in the light switch; separate buttons operate choke and starter and a central switch for the flashing indicators operates a tell-tale light where it will catch the driver's eye.

The engine responds eagerly to the throttle, so here we go. The clutch handles a fast start and full throttle upward changes without spin.

There was no time during this initial brief workout with one of the first production models to calibrate speedometer and check tachometer, but at an indicated 5500 rpm first gear produced a speedometer 21 mph, second gave 35 and third gear took it up to 60 mph, all of which conforms quite closely with theoretical expectations. The engine twirls freely,



the new Austin-Healey Sprite. His conclusion: "A lot of fun for very little money..."

with a crisp note but is not too noisy by sports car standards.

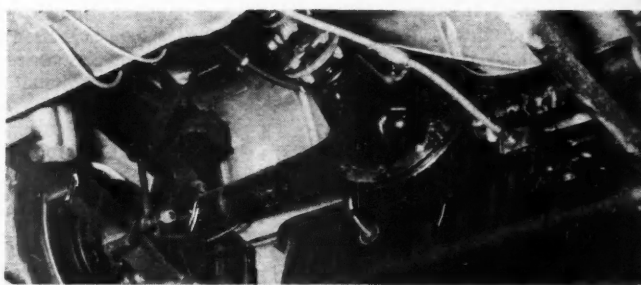
Steering is light, lively and quick—needing only $2\frac{1}{2}$ turns from lock-to-lock. And now for the first corner. Twitch the wheel to get the feel, the rear end dips, and . . . this car oversteers. Ease off the wheel, take her 'round on the throttle and get set for the next bend. Yes, a flick of the wheel is enough and 'round she goes, right on the line. Cornering fast one can notice some rear end roll but the center of gravity is so low that the car does not feel unstable, and any tendency for the tail to drift outwards is easily checked by the quick steering. It may seem startlingly quick to anyone whose reactions are attuned to sleepy understeering cars needing $4\frac{1}{2}$ turns from lock-to-lock, but anyone accustomed to sports cars, or to small rear-engined family cars, will soon catch on.

The ride is well damped but by no means harsh. This is not a squealy Healey; tire noise is low. On a nasty bend with a hump in the middle, the car sat right down without wandering, but a series of bumps on a fast bend can keep one more busy with the steering. The brakes seemed light and good. I slammed them on hard at 50 mph on a wet surface and achieved a quick straight-line stop without any need to fight the wheel.

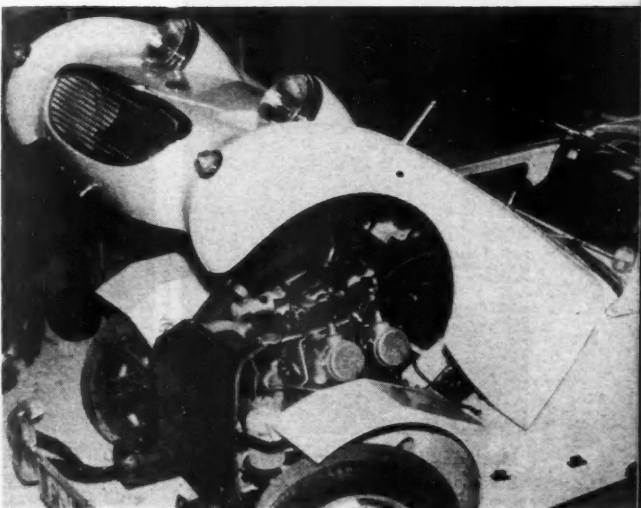
The whole front end lifts to give unobstructed access to power unit and front suspension; it is fairly heavy, but certainly not beyond the strength of a healthy youngster. Rear seat backrests tip forward for access to the tail lockstep where there is space for spare wheel, tools, a small suitcase and one or two small bags.

I saw an indicated 80 mph with the tach showing a little over 5000 rpm and the car was still accelerating. I hear that prototypes have lapped the M.I.R.A. test track at 81-82 mph and recorded the following acceleration figures: 0 to 30 mph in about six seconds, 0 to 50 in 13.8, 0 to 60 in 19-20, and a standing quarter-mile in a little over 22 seconds. Soon I hope to find out exactly what a production model will do, but already it is obvious that the little Austin-Healey Sprite [\$1795, New York port of entry] offers a lot of fun for very little money.

/MT



REAR SUSPENSION (above) features quarter-elliptic leaf springs, lever-type shocks. Front end (below) opens for easy access to 948cc engine which develops 48 bhp.



Feather-Foot Champ

THREE MOBILGAS ECONOMY RUN AWARDS IN A ROW.
WHAT IS MEL ALSBURY JR.'S WINNING SYSTEM?

by Robert C. Scollay

NOT ALL TOP-FLIGHT competition drivers are the brave who flirt with destruction in the corners of race courses. Among others are the rallyists who have demonstrated fantastic driving skill over routes and conditions approaching the impossible. Still another event that has been overlooked as a test of driver skill and endurance is the economy run—hardly considered spectacular—yet drivers in these events encounter drama and tense moments the public never hears about.

Mel Alsbury Jr., who looks even younger than his 28 years, has experi-

enced the tensions and anxieties that are a part of economy driving. Mel has established himself (at least unofficially) as the champion economy driver, having won the Sweepstakes Awards in the last three annual Mobilgas Economy Runs. How he did it sounds easy coming from Mel, a vice-president in his father's Chrysler dealership.

First of all, he says, Mel Sr. has been an active participant in the Economy Runs since their inauguration in 1936. Being brought up in the automobile business is another asset. Eight years of participation, first as an observer in 1950, studying the techniques of Bill Stroppe, Les Viland and that late mechanical genius, Clay Smith, added to the background needed to become a champion.

Mel Jr.'s first drive was in 1955. He finished sixth in class, pushing a Chrysler Windsor. The next year he hit the jackpot—winning the Sweepstakes Award in an Imperial Southampton. In 1957 he repeated in a Crown Imperial. Then came 1958 and the first three-time consecutive win, plus the added bonus of a class win (for the second time) by brother George, who just

turned 21 on the day the run ended.

The Alsbury family participation in the 1958 Mobilgas Economy Run started with the random selection of two cars—a Crown Imperial to be driven by Mel Jr. with Mel Sr. as co-driver and a Chrysler New Yorker to be driven by George with John Justice as co-pilot. Both cars were sponsored privately by Mel Sr.

Several Chrysler Corp. and Lincoln cars had been secretly tagged as satisfactory at dealer establishments in Berkeley, Calif. by a United States Auto Club representative. Typical of the intense rivalry between contestants, a private deal was made between the Alsbury and Bill Stroppe, representing the Lincoln-Mercury Dealers Association, to approve each other's final selection of the cars.

Stroppe spent three days carefully examining each of the cars which the Alsbury's were authorized to select. He wanted to be sure that the cars were strictly stock and that there was no break-in mileage concealed by a disconnected speedometer. Mel was much more casual about the affair. He had complete confidence in the Chrysler and



MEL ALSBURY JR. stands beside big Sweepstakes, smaller Class trophy.



CO-DRIVER Mel Sr., discusses log with United States Auto Club official. J. C. Agajanian, perennial starter of event, waves Mel Jr. off the starting line.



STRAIN OF GRIND SHOWS ON CHAMPION'S FACE. AN OBSERVER IN THE FRONT SEAT FEELS IT ALSO AND TAKES TIME OUT FOR A NAP.

Imperial winning potential. In 15 minutes Stroppe had Mel Jr.'s stamp of approval on two Lincoln Continentals.

Mel seemed a little surprised when asked what was done to prepare these cars for the run. "Actually little more than new car service," was his reply. "We installed one-size-leaner carburetor jets and advanced the spark 12 degrees as allowed by the rules. Beyond that we made sure the brakes did not drag and the cars were tuned and adjusted as we would do for our customers. We had no big staff of mechanics; the work was done by John Justice, who works in our service department."

Shortly after 1 A.M. in Los Angeles on April 13, with the fanfare of the start behind him, Mel pointed the nose of the Imperial toward Phoenix, Ariz. He has no special driving techniques or tricks. He simply describes it as "good economy driving." You can feel him build the car's speed carefully, smoothly and slowly, then let the car "float" with as little speed change as possible. Speed changes of as little as one or two miles per hour are highly important to him. Like other good economy drivers, he keeps his eyes far ahead to check traffic

signals, passing distances and any other traffic conditions that might require a stop or abrupt change in speed. He claims this has become habitual with him and has influenced his everyday driving.

Both Mel and brother George liken the run to an endurance contest. A typical day for Mel, such as the second day of the run, seems to prove the point. To make sure everything was in readiness he was up at 1:30 A.M. and on his way to the impound area for the 3 A.M. start. Given the starting flag, he began the nine-hour grind from Phoenix to El Paso which he would drive without relief as he did all legs of the run. Out on the open highway his tired eyes fought against oncoming headlights and searched for elusive speed zone signs which must be obeyed. With the windows tightly closed to cut air resistance, he avoided a much wanted cigarette and waited hopefully for the next town or speed zone. There, at slower speed, he could crack a windwing which would not affect the car's performance and snatch a tension-relieving smoke.

At daylight, in Safford, Arizona he took on just enough fuel to reach El

Paso. Fuel means weight and weight means lower gas mileage but he carefully calculated four gallons would be enough. Then came the brief respite of a half-hour "brunch" stop and back to the grind. With the sun still low in the east and shining directly into Mel's eyes, visibility was miserable. The morning wore on and the El Paso impound was reached shortly after noon. But the day was not over. One at a time the cars were leveled and the refueling began. This long process involves filling the tanks very slowly with a small-diameter gas nozzle to avoid air bubbles in the tank. Nobody left the area until all 29 cars were filled. At these stops everyone was naturally glad to sacrifice about three hours of badly needed rest for the opportunity to learn how much fuel the other fellow had taken on and how each stood on the scoreboard. Mel winked at his father when the figures were in—he was confident he had it in the bag.

Then came a series of interviews with the press, posing for photographers and finally an appearance on a TV show. Mel could then get a light dinner but the pressures of the day left him with little appetite. Back in the hotel room, he settled down to study the log and plan a course of action for the next day. At 11 P.M. he reached for the phone and asked the operator to wake him at 1:30 A.M.—in just two and a half hours the grind would begin again.

Mel and George have also referred to the run as being something like a rally. One of the factors that applies extreme pressure on the drivers is the high average speed that must be maintained. The average speed for the 1883.2 miles of the run this year was set at 45.02 miles per hour. At first glance this may not seem high but considering it meant passing through 350 miles of restricted speed zones, 141 cities and towns and 316 signalized

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SWEEPSTAKES WINNER at an intermediate refueling stop. No time was wasted at these one- to three-minute stops for partial load.

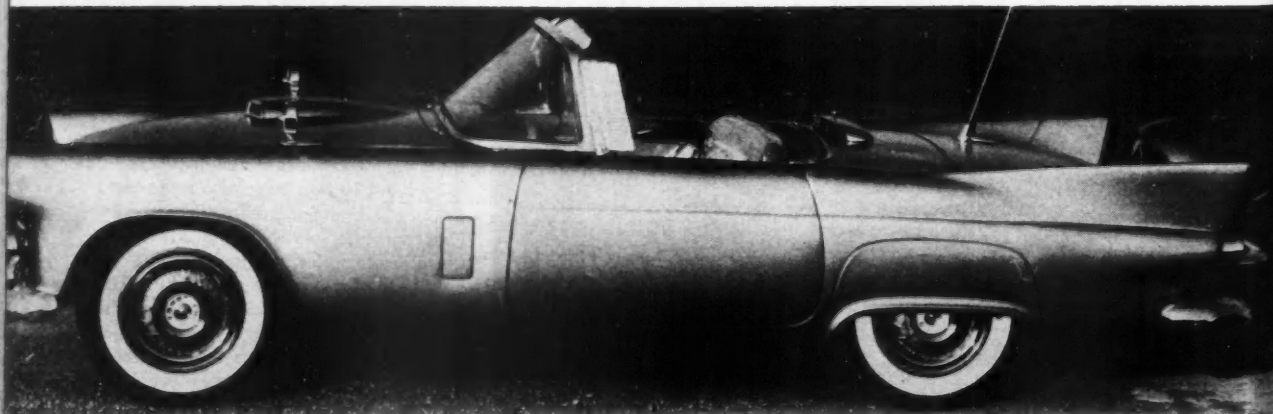
trends in customs

IN THE EAST

by James E. Potter



TWO AIRSCOOPS and 62 louvers in hood keep engine cool in sleek Studebaker Champ owned by Brad Peters, St. Paul, Minn. Grille uses round rod.



LENGTHENED by extended front and rear fenders, Richie Giorgetti's '56 T-Bird takes on a more graceful, streamlined appearance. Raised rear fins are shaped around '57 Plymouth tail lights.

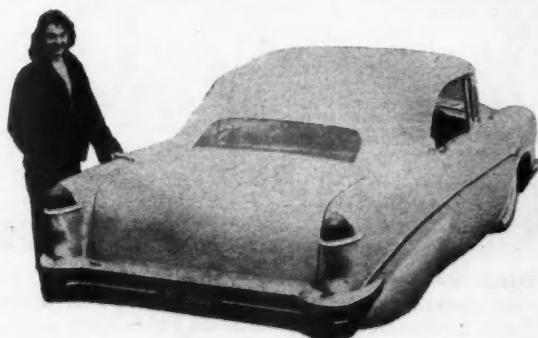


DIFFERENT FROM WESTERN CUSTOMS is Bill Kessinger's Michigan '56 Ford convertible with its Canadian Meteor grille, seldom seen in the West. Packard tail lights in reshaped rear fenders, two-inch lakes pipes, louvered hood, white Naugahyde with black button upholstery, however, are remindful of western customs.



"STARLIGHT SILVER" '56 Chevy convertible owned by Al Bergler of Detroit is modified with Chrysler quad headlights, Chevy bumper and Dodge crossbar in grille, Olds rear bumper, Packard tail lights, cut-down rear window.

UNTIL THE LAST COUPLE OF YEARS, customs from the East could easily be distinguished from those modified in the West. Not so, today. Molded grille shells, extended and reshaped front and rear fenders, installation of quad headlights, changed side trim, and the usual lowering so that the car hugs the ground, are Eastern customizing efforts seen in the photos on these pages. Different perhaps, however, is the Meteor grille used on the '56 Ford convertible (top photos). This type of installation, of course, probably resulted from the proximity of Canada to Wyandotte, Mich., the originating point of this custom. Also set apart from the West are the small window opening in the convertible (right), and the bubble-type rear fender skirts (above). Be that as it may, the custom trends of cars from the East are an interesting comparison to those in the West, shown on the following pages.



trends in customs

IN THE WEST



MORE RADICAL CUSTOMIZING of the West is exemplified by MT's cover car, a '51 Ford hardtop owned by Joe Tocchini of Oakland, Calif. It has quad headlights, dual

Olds tail lights, '57 Buick grille molded in, nerf bar front bumper, all wheel wells cut out, and special body sculpturing on fenders and bottom side panels.



BUICK HEADLIGHT UNITS are grafted onto this '51 Merc semi-custom sedan, owned by Bill Wolfe of Turlock, Calif. Double-bubble Packard tail lights, with one lens



inverted, highlight slightly finned rear fenders. Rounded corners on hood, deck and doors are a typical Western innovation. Grille shell and bars are special handformed.



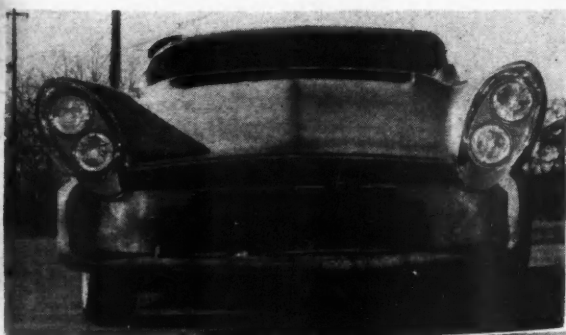
SCOOPS OVER HEADLIGHTS, molded grille shell, modified center using Olds parking lights, and smoothed front bumper are typical of Western custom styling.



SLANTED QUAD HEADLIGHTS fitted into a continuous grille shell, separated front bumpers, sculptured wheel well openings highlight LeRoy Goulart's Ford two-door.

IF THERE IS any one single factor distinguishing customs in the West from customs in the East, it is the extensive use of body sculpturing in the modifications. Typical of this trend is the '51 Ford hardtop shown on MT's cover and to the left. With the design and all body work by Joe Bailon of Hayward, Calif., this radically restyled car won the national award for the best semi-custom at this year's Oakland custom car show. Other fine examples of sculpturing are seen in the '56 Chevy hardtop (below) and in the '51 Ford two-door (right).

UNIQUE CONTOURING marks this '56 Chevy hardtop from San Jose, Calif., shown below in near-completed stage. Rainbow-hued primer coat produces the striped effect.



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"My Greatest Thrill"

MOSS—GIANT KILLER

"Twenty laps from the end I had a 35-second lead, but this was dwindling fast as I tried to hold my fraying tires together..."

as told to Gordon Wilkins

DAVID AND GOLIATH. Jack the Giant Killer . . . In the Scriptures, in legend or in real life, the story of the little guy who humbles more powerful adversaries by using his brains always gets a good reception. And Stirling Moss's victory in the Argentine Grand Prix, first Grand Prix race of the 1958 World Championship series, had all the elements to fit the classic formula.

It was not just that Moss himself is a little guy—one who could quite well have become a jockey, and in fact won prizes for horsemanship long before he drove a car. He was also driving the smallest car in the race, with an engine giving a clear 100 horsepower less than those which thundered alongside him. In fact, it was so underpowered by Formula I Grand Prix standards that the Cooper Car Company who built it had never cared to admit publicly how small the engine really was for fear race organizers might oppose it and bar it from the major events. The car had been designed for second-league Formula II events (1500cc) but the word was spread around discreetly that its Coventry Climax engine had been enlarged from 1500cc to 2200cc against the 2500cc of the full Formula I machines. In fact the engine had never been stretched beyond 1960cc, and in the race it was giving a mere 174 horsepower against the 270-290 delivered by the Ferraris and Maseratis.

It looked like a fairly hopeless mount for the No. 1 aspirant to Fangio's World Championship crown, but Moss had little choice.

The race had been organized under chaotic conditions. The Mayor and Corporation of Buenos Aires, who normally sponsored it, had withdrawn for economy reasons and the Argentine Automobile Club found finance only at the last minute—so late that Britain's Royal Automobile Club lodged an official complaint with the International Federation, alleging that regulations had been received too late to permit British entrants to make shipping arrangements. In fact neither Vanwall nor B.R.M. was ready to race, as they were still modifying their engines to suit the new rule which bans alcohol and insists on the use of 100-octane aviation gasoline. Maserati had already announced their retirement from racing and only Ferrari sent an official team, consisting of three of the latest Dino V6 cars, named in memory of his son. However, Maserati were there in force unofficially, with six cars maintained by works mechanics for the Scuderia Sudamericana, the new outfit sponsored by Giambertone, Fangio's manager.

The Argentine Club approached Moss, who was wintering in the Bahamas, and hinted that a Maserati might be made available for him to drive. Moss, anxious not to miss a chance for points counting towards the World Championship, accepted the invitation but declined the car. Instead, he got in touch with Rob Walker, enthusiastic proprietor of a South of England garage and a former racing driver himself, who ran a Cooper Climax as a private entry in European races with Alf Francis, formerly Moss's personal mechanic, to service it. Moss had been impressed with the possibilities of the Cooper Climax when Jack Brabham, the Australian star, held third place with one in the Monaco Grand Prix of 1957; he kept ahead of far more powerful cars, until fuel pump failure stopped him a few minutes before the end of the race. Moss had promised to drive a Cooper when the opportunity arose.

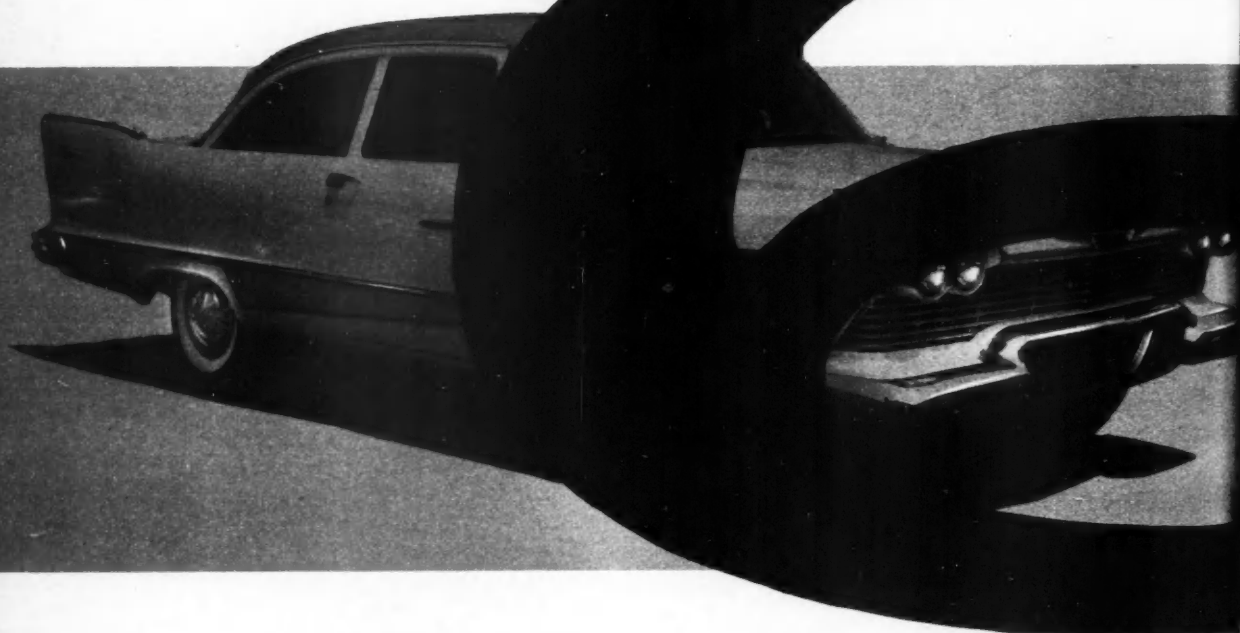
To Moss the Argentine race looked like the chance he had been waiting for, but few people agreed

continued on page 55

Moss in the tiny Cooper prepares to overtake Hawthorn's Ferrari in Argentine Grand Prix



Are the



Good Economy Buys?

SIMPLY STATED, the question was this: "Are the sixes good economy buys?" The "sixes" meant today's six-cylinder automobiles. "Good economy buys" meant are the sixes less expensive to operate than the modern V8s?

To find the answer to this question it was necessary to take a step back into time. I felt something like the man on the television program who had a machine that would transport him back in time to any date he chose. The only difference was that he had fun. Getting behind the throttle pedal of a six-cylinder engine today is like ripping the last five years from the face of automotive history. And those good old days weren't too good as far as the performance of some automobiles was concerned.

Few automobile manufacturers are doing any development work today on their six-cylinder engines. Engines in the cars used for this test — Chevrolet and Plymouth — are practically identical to the six-cylinder engines used in the same cars two to eight years ago. Chevrolet's present six dates back to 1951 and its basic design was first brought out in 1929. Plymouth's is the same as its 1955 engine and very similar to the first six brought out by them in 1934. Compression ratios of both engines have been raised each year to enable them to take advantage of improvements in gasoline, and other minor refinements have been made on them.

I was more than a little surprised to learn that over 26 per cent of the total production of 1957 Chevrolet, Ford, and Plymouth automobiles had six-cylinder engines. Of this group, Chevrolet was the largest producer of sixes. Because I wouldn't consider buying a six I took it for granted that no-one else would, and the only way one can tell if a car he sees has a six-holer in it is by lifting its hood and taking a look. I was assuming that a modern automobile would have a modern engine under its hood. Six-cylinder engines are available in practically all '58 Chevy and Plymouth body styles, but statistics show that most of them are sold in the cheaper models.

All six-cylinder engines built by Chevrolet since their introduction 29 years ago have had overhead valves. Plymouth's six is of L-head design with its valves in its cylinder block. The engines vary considerably in their bore-stroke relationship and only the Chevy comes near the modern practice of having a bore diameter larger than its stroke length. The Plymouth, with its comparatively small bore and exceptionally long stroke, is a throwback to the days when small bores and long strokes were used to enable cylinder blocks to be made as short as possible.

An advantage of large cylinder bores in an engine with overhead valves is that they make it possible to use valves

In sharp contrast to the continued engineered evolution of V8 engines, development work on the sixes is at a standstill. This Chevy and Plymouth Six comparison test report tells why.



'S Economy Buys?

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with comparatively large heads. This enables the engine to breathe well at high crankshaft speeds. A short stroke gives the advantage of low piston speeds at high crankshaft speeds. This reduces engine wear and enables the engine to run safely at high speeds. A disadvantage of a short stroke is low torque output at low engine speeds compared to the torque possible with a longer stroke. However, the stroke length of the Chevy can be considered long compared to those of modern V8s.

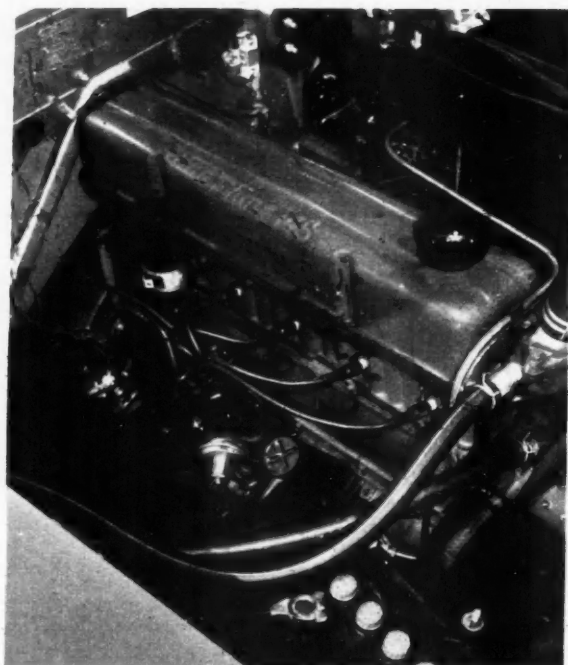
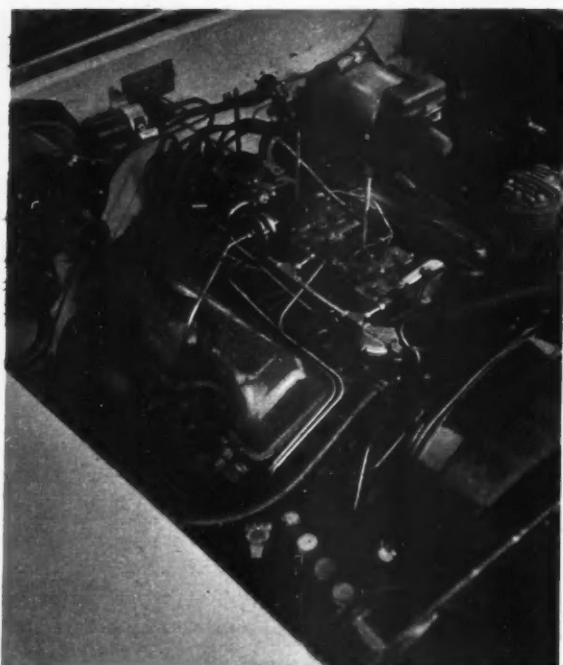
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Its valve-in-head design is a definite advantage to the Chevy as far as power output is concerned. The difference, though, between its rating and that of the Plymouth is quite small and not enough to have any influence on the choice made by a prospective purchaser. An L-head engine, such as the Plymouth, has fewer moving parts in its valve train, which could be an asset in the long haul as far as engine upkeep expenses are concerned. Hydraulic valve lifters in the Chevrolet eliminate the need for valve lash adjustments during the life of the engine but the solid lifters in the sixes built by some of the other manufacturers make it necessary for the lash to be adjusted frequently if the noise of the valve train is to be maintained at a comfortable level. The cost of these frequent adjustments must be taken into consideration when economy of operation becomes a factor in car

ownership; such maintenance costs can nullify gasoline savings.

Solid valve lifters are also used in the Plymouth, but the fewer parts in its valve train makes it possible for it to run much longer between valve lash adjustments than is possible with overhead-valve engines. The reason for this is the many additional wear points in the valve train of overhead-valve engines and the high rate of wear between the ends of their rocker arms and valve stems. High wear on the contact areas of the stems and arms is the result of rocker arm geometry that causes the valve ends of the arms to move a slight amount laterally as they travel through their arc of movement and drag across the tips of the valves. This lateral movement also forces the valve stems from side to side in a plane parallel to the centerline of the rocker arms, causing valve guide wear to be excessive in comparison to that in an L-head engine. In the Plymouth the line of movement of the valve lifters is parallel to that of the valves and no lateral forces are exerted on the valve stems.

Compression ratios in both engines are low by today's standards. In some localities it might be possible to use regular grades of gasoline in the engines. Factors that would determine the grade of gasoline required would be the altitude of the area in which the car is driven and the octane rating of the gasoline itself. If it were possible to use regular



ENGINE SIZE COMPARISON between Chevrolet V8 (left) and Chevrolet 6 clearly illustrates component accessibility

differences. For the man who works on his own car, the simplicity of the 6 layout makes it very much easier.

gasoline, this would be another point in favor of the cars as good economy buys.

The Chevy I tested was a Delray two-door. It had a synchromesh transmission, without overdrive, and 3.55 to 1 rear axle gears. This was an economy car from the word "go." It was fitted with only the bare essentials. It didn't have an ounce of power equipment, nor did it have a radio. In comparison, the Plymouth, which was a Savoy two-door, was on the deluxe side; it had an overdrive and a radio. Its rear axle ratio was 4.10 to 1.

Both engines started easily, hot or cold, and idled smoothly. The suspended clutch pedals felt a little strange at first but I soon became accustomed to them. Cars have had suspended brake pedals for several years but the short pedal movement normally required to apply brakes prevents the driver from noticing the strange arc through which they move. An over-center spring in the Plymouth clutch linkage helps the driver disengage the clutch after the pedal has passed the halfway point in its arc of movement. This spring helped a little too much by exerting so much pressure on the linkage that the pedal felt as though it didn't want to follow the foot when the clutch was being engaged. In the Chevy, pedal pressure was much more uniform and I felt that I had complete control over the clutch at all times.

The Plymouth's clutch engaged smoothly and its transmission was extremely quiet. In comparison, the Chevy's clutch was chattery and its transmission was rough and noisy. This is characteristic of Chevy clutches and synchromesh transmissions, as anyone who has owned a car fitted with them will know. The gear shifting mechanism in the Plymouth functioned smoothly and quietly, but the Chevy assembly was rough and tinny sounding.

Once up to speed on the highway both cars would cruise nicely with normal traffic. Either would probably make a day's or week's trip in an elapsed time within minutes of that possible with any other car. Its driver and passenger would know they had been somewhere, though, whereas the crew of a car that had a modern engine and automatic transmission would undoubtedly be in better shape both physically

and mentally. The inherent jerkiness of a clutch and synchromesh transmission assembly detracts much from the physical comfort of driving or riding in an automobile. And the ever-present feeling that the engine is working hard to maintain the car's cruising speed is not at all conducive to mental tranquillity.

One good thing about the sixes is that by working hard all the time they keep their spark plugs clean. There isn't any of the problem current in V8s of the engine loafing so much around town that its plugs foul and start to misfire when the car is taken out on the road where it can be driven hard. Another good thing about the sixes is that the weight distribution of the cars they are in is very good, due to their in-line design. Both cars tested had a light feel on the steering wheel, even without power steering, and they were very easy to drive as far as steering and other handling features were concerned.

Conditions under which the sixes become inadequate are when acceleration is required and when driving in hills or at high altitudes. Ten years ago either of these cars could have held its own in traffic or anywhere else, but since that time performance standards have been radically changed by the new V8s. Most modern V8s are a pleasure to drive because of their exceptional acceleration and hill-climbing ability. Also, they have enough reserve power that they aren't handicapped too much by normal power losses at high altitudes.

Passing ability of both cars is very low at highway cruising speeds. It is almost impossible to pass a truck and trailer combination on a three-lane highway without practically unlimited visibility ahead. Passing on mountain roads is out of the question on uphill stretches but sometimes it can be managed on level or downhill sections. At any altitude above 3000 feet second gear must be used for speeds under approximately 40 mph. Downhill, they go like bombs.

Entering freeways under some conditions is sometimes more nerve-wracking than a body can stand. In the Los Angeles area freeway traffic is usually traveling at 55 to 60 mph, and if you can merge with it at its speed there is no

difficulty. However, if you are unfortunate enough to get stuck behind an idiot who thinks he has to stop or slow down to 20 mph before he pulls into the line of traffic and then finds he must accelerate to 60 mph in 14 feet or get clobbered from the rear, the sixes can present something of a problem. About all that can be done is sit and wait for a hole long enough to give you a chance to accelerate up to speed before the traffic catches you. The only problem is that holes this big seldom come along. This leaves no alternative but to bluff your way into traffic and hope for the best.

One other effect of the high performance standard set up by modern V8s makes it rough on the driver of a six. A man traveling on a freeway at 55 mph will assume that a 1958 automobile pulling onto the road ahead of him will have enough acceleration to merge with traffic without difficulty. But if that '58 automobile has a six-cylinder engine and its driver hasn't judged too well, he's apt to get a rear deck full of bumper before he can get out of the way. On the other hand, the man on the freeway will automatically make allowances for the lower performance standard of an old clunker that pulls onto the road ahead of him and either slow down for it or pass it. In other words, it really doesn't pay as far as safety is concerned to have a current model automobile that isn't up to modern performance standards.

The performance capabilities of these cars, as related to acceleration, hill-climbing ability, and cruising speeds were necessary to this test only as a factor of comparison between the cars being tested; however, a comparison of their performance to that of the same makes with modern V8 engines was considered necessary so the price paid for better fuel mileage would be realized. Performance figures for the cars will be found in the accompanying chart.

But the question facing us is one of economy rather than performance. A man who is a bug on economy, or the operator of a fleet of cars, isn't apt to be worried about performance. His primary interest is the dollar total of the gas and oil receipts plus the receipts for money he's spent on maintenance work on his car or fleet during a certain period of time. From this standpoint I must admit the sixes are good economy buys in comparison to V8s of the same make. The fuel mileage figures shown in the test result charts prove this conclusively.

But just how much is this economy really worth to an individual who buys for his own use? To me it would be worth nothing. I would rather buy a little more gasoline and enjoy modern transportation. I don't believe there is a person in this country who would like to live in a cave just to save the rent or mortgage payments on the house he is living in. To me it is equally ridiculous to drive a primitive automobile when cars that are so much better are available. Add to this that a six is not a good buy, regardless of its fuel economy, if a person hopes to get any real pleasure from driving. For use primarily in mountains or at high altitudes a six should be definitely out of the question. And, if a man drives much on freeways or turnpikes his life expectancy should be much greater with a V8.

Another thought in favor of the V8s is that most of them, if they are driven at the same performance level provided by sixes, should give almost as good fuel mileage, with the option of performance when it is needed. The problem is that when the average driver becomes accustomed to the performance he can get from a V8 he won't police himself to the extent of driving within the sluggish limits of six-cylinder performance.

/MT

PERFORMANCE

	'58 CHEVROLET		'58 PLYMOUTH	
	6	V8	6	V8
ACCELERATION				
From Standing Start				
0-45	8.6 secs	6.4 secs	9.8 secs	5.7 secs
0-60	15.0	9.1	17.4	9.1
Quarter-mile	20.2 & 69 mph	16.5 & 83.5 mph	21.6 & 66 mph	17.4 & 84 mph
Passing Speeds				
30-50	5.3	3.6	7.2	3.3
45-60	6.1	3.2	7.4	3.2
50-70	10.1	—	12.3	—
50-80	—	8.0	—	8.5
FUEL CONSUMPTION				
Stop-and-Go Driving	16.2 mpg for 454 miles	12.7 mpg for 260 miles	16.5 mpg for 310 miles	12.1 mpg for 1150 miles
Highway Driving	19.1 mpg for 662 miles	14.6 mpg for 303 miles	18.6 mpg for 440 miles	17.1 mpg for 200 miles
Overall Average	17.8 mpg for 1116 miles	14.2 mpg for 1063 miles	17.5 mpg for 750 miles	13.7 mpg for 1350 miles
Fuel used: Mobilgas Special				

SPECIFICATIONS

Chevrolet 6

ENGINE: 6-cyl. ohv. Bore 3.56 in. Stroke 3.94 in. Stroke/bore ratio 1.05:1. Compression ratio 8.25:1. Displacement 235.5 cu. in. Advertised bhp 145 @ 4200 rpm. Bhp per cu. in. 0.62. Piston speed @ max. bhp 2758 ft. per min. Max. bmep 137.7 psi. Max. torque 215 lbs.-ft. @ 2400 rpm.

TRANSMISSION: Single plate dry clutch. Manual 3-speed, top 2 synchronized. Ratios 2.94:1, 1.68:1, 1.00:1.

REAR AXLE: Conventional differential, ratio 3.55:1.

WEIGHT: With gas, oil and water 3540 lbs. (53% front, 47% rear). weight/bhp ratio 24.4:1.

Plymouth 6

ENGINE: 6-cyl. L-head. Bore 3.25 in. Stroke 4.63 in. Stroke/bore ratio 1.42:1. Compression ratio 8.0:1. Displacement 230 cu. in. Advertised bhp 132 @ 3600 rpm. Bhp per cu. in. 0.57. Piston speed @ max. bhp 2772 ft. per min. Max. bmep 134.4 psi. Max. torque 205 lbs.-ft. @ 1200 rpm.

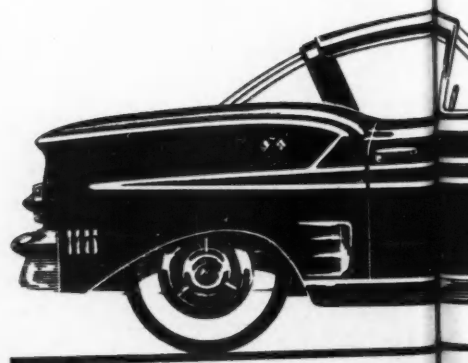
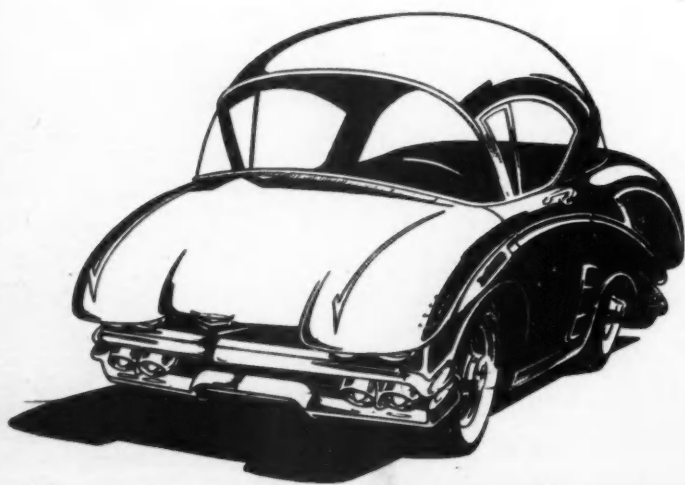
TRANSMISSION: Single plate dry clutch. Manual 3-speed with over drive, top 2 synchronized. Ratios 2.50:1, 1.68:1, 1.00:1, overdrive 0.70:1.

REAR AXLE: Conventional differential, ratio 4.1:1.

WEIGHT: With gas, oil and water 3570 lbs. (54% front, 46% rear). weight/bhp ratio 27.0:1.



TESTING A SMALL CHEV





RUMORS HAVE ABOUNDED in recent months to the effect that there would soon be a new small Chevrolet offered for public sale. We are now in a position to confirm those rumors. We have actually tested two prototype examples!

How did we accomplish this almost impossible feat? It was simple. Driving up outside the famous General Motors Proving Grounds at Milford, Mich., we waited until the gate guards were busily engaged in keeping out a group of GM development engineers, then marched right in with a platoon of maintenance men. Once inside, we just walked purposefully to the experimental garage. Nothing to it.

Looking at the two experimental small Chevrolets we found there, we were immediately impressed with the degree to which their design had been influenced by the more popular foreign small cars. One Chevrolet was little more than an American adaptation of the Volkswagen, complete to the walnut-shell body shape. It did have a wrap-around windshield and lavish trim in common with its full-sized counterpart, and there was a bit more interior room than the Teutonic product can boast. Visibility, too, was much better. However, the real superiority is most apparent when you fire up the powerful V8 engine. The quiet exhaust note has a competent, authoritative sound. This is more than justified when the car is put through its paces out on the track. Just a bit better than the general run of economy car, acceleration averaged 5.3 seconds for 0-60 mph. Track conditions were a bit crowded, so we did not attempt any high speed runs. Top speed should be about 147 mph, adequate for this class of car. In fact, except for fuel economy (around 3.2 mpg), this is a most satisfactory car.

The other small Chevrolet was specifically developed to eliminate this problem. It gets over 75 mpg, albeit with slightly reduced performance and carrying capacity. In appearance it is very much like a 1958 Chevrolet Impala scaled down . . . and down . . . and down. It has that big car look, but only one of us was easily able to occupy it. Once we had made the trip down to the track (40 minutes), we were able to determine that the acceleration was only slightly inferior to an economy-tuned Citroen 2-CV, and that the top speed was a startling 26 mph.

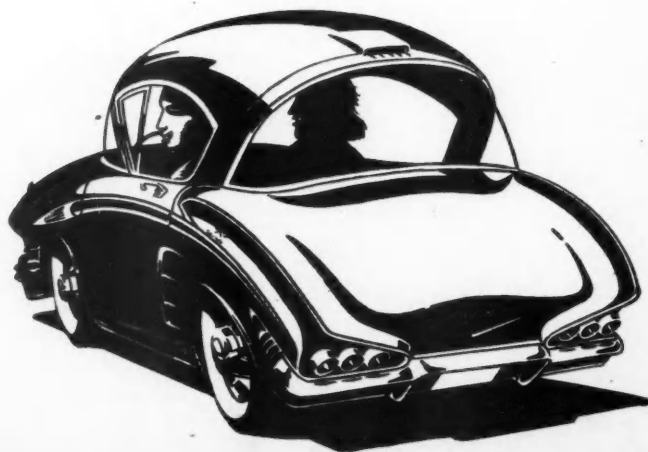
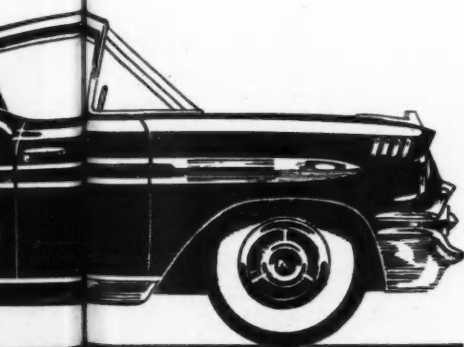
After taking a few choice shots with our unobtrusive Speed Graphic, we left the Proving Grounds without incident. The guards were still arguing with the engineers and did not notice our departure.

Summing up, we would venture the opinion that Chevrolet is well justified in the decision not to market either of these cars for 1959. But if they are able to combine the virtues of both cars, watch out for them in 1960!

/MT

CHEVROLET

Text and Illustrations by Bob Cumberford and Stan Mott



SUNBEAM RAPIER



SHORT RADIUS TURNS FROM SPEEDS OF 30 - 45 MPH NEARLY TORE THE TUBELESS CUSHIONS OFF THE WHEELS.

MTEST BY BOB ROLOFSON



THE "DOOR KNOB" top releases are easier to unlock than to set. During our runs around town they became loose and caused some consternation.



CONTROL PANEL is equipped with a full range of instruments. Glove compartment is spacious and can be reached by driver.

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BRITAIN'S RALLY-BRED SUNBEAM RAPIER has been given a new suit and a bucket full of vitamins. Without becoming too flamboyant, the Rapier has been "Detroitized" through the clever use of old and new body panels. Gross horsepower has been boosted from 67 to 73 bhp by boring the engine from 1390cc to 1494cc (91.13 cubic inches), raising compression, adding larger valves and an extra carburetor. In keeping with the car's world rally successes, the new engine has been labeled the "Rallymaster."

The MT test car was one of the first Rapier convertibles to reach the West Coast, and is a new venture for the Rootes Group. Through the ingenious use of hoops, hinges and arms, the top can be adjusted to three positions: fully closed (it is watertight); fully open (in which position the top drops behind the rear seat and is covered with a tailored tonneau); and (my favorite) the half open, or coupé-de-ville position. In the latter trim, the car drew an unusual amount of sidewalk discussion and praise during mileage trips through Los Angeles. In the interests of safety (and maybe the cost of a new top) some sort of positive locking device should be incorporated into the two central support arms. The present "doorknob" locks are easier to unlock than to set, and are inviting gadgets for passengers to play with. To test my suspicions, I allowed my three youngsters to give the new car the once-over. I went inside for exactly five minutes, came out for a look-see, and guess what? BOTH arms were in the released position.

The four-speed gearbox is controlled with a delightful, short shift lever mounted on the transmission tunnel. Although reverse can be crashed a bit too easily, the floor shift works beautifully, and should make rally enthusiasts shout with joy. First is still geared for climbing walls, with second becoming the starting cog. Gear spacing between second and third is quite a jump, but the "Rallymaster" engine is flexible enough to bridge the gap with no apparent strain. These extremes in gearing do little to add to 0-60 times, but from 60-90 (previous top was 80) the Rapier steps out with authority. Using 5500 rpm as shiftpoint for the acceleration runs, I went into second at 28 mph, into third at 36 mph, and into fourth at 60 mph, with no sign of torture or heavy breathing from the new engine. In fourth it climbed

to 90 mph before I ran out of room, and indicated that with a little longer run, it could grab a bit more — still without signs of heart failure in the sturdy new mill.

Finish and interior appointments are (as usual with Rootes) top drawer. Exterior paint and trim are color-coded with interior trim and upholstery, presenting a really luxurious package. Adding to this elegance are the firmly sprung seats — padded with foam rubber — comfortable arm rests, ashtrays for front and rear seat passengers, windows that roll up and down effortlessly, combined open and closed storage space in the dash, and a spacious trunk.

A large tachometer, and equally large speedometer (with tripmeter) are located over the steering column. Unfortunately the horn ring arcs between the driver's eyes and the instruments; a half ring would solve this problem nicely. In the center of the dash are the ammeter, fuel, oil pressure, and water temperature gauges. Beneath this is a fresh air and heater mixing panel, with space for a radio and clock. The large rear-view mirror is centrally located, and furnishes excellent coverage through the large side and rear windows.

In researching for this test, I dug up reams of reports, pointing up the incredible world rally records of the Rapier and its predecessors. Needless to say, by the time I had waded through this material, I was on pins and needles — waiting for an opportunity to throw it around a bit. These tests were done in a large private parking lot, and produced some interesting results. I didn't have time to fade the brakes — after 19 successive slowdowns (60-20 mph) and an all-out tire-ripping fade-proof stop on the 20th run, I gave up that quest. Putting the car into short radius turns from 30-45 mph nearly tore the creampuff tubeless cushions off the wheels, produced a fair amount of roll and quite a bit of tail-wagging, but no end swapping. The new recirculation ball steering is fast (2½ turns lock-to-lock), and doesn't hang up on full lock. On long high-speed turns, the rear end will take off, but is easily brought back into line with a slight crank of the wheel.

All things considered, the new Rapier is an excellent road machine, and with its big-hearted engine, floor shift, improved steering and rugged brakes, it will have European rallyists talking to themselves!

/MT

Photos by Bob D'Olive

ACCELERATION

From Standing Start
0-45 mph 11.2 0-60 mph 19.6
Quarter-mile 22.2 (63.3 mph)
Passing speeds
30-50 mph 7.7 45-60 mph 7.9
50-70 mph 16.3

CRUISING SPEEDS

Maintains constant speed of 60-70 mph

TOP SPEED

90-93 mph (estimated)

FUEL CONSUMPTION

Stop-and-Go Driving
18-23 mpg for 328 miles
Highway Driving
25-28 mpg for 110 miles
Overall average
24.6 mpg for 438 miles

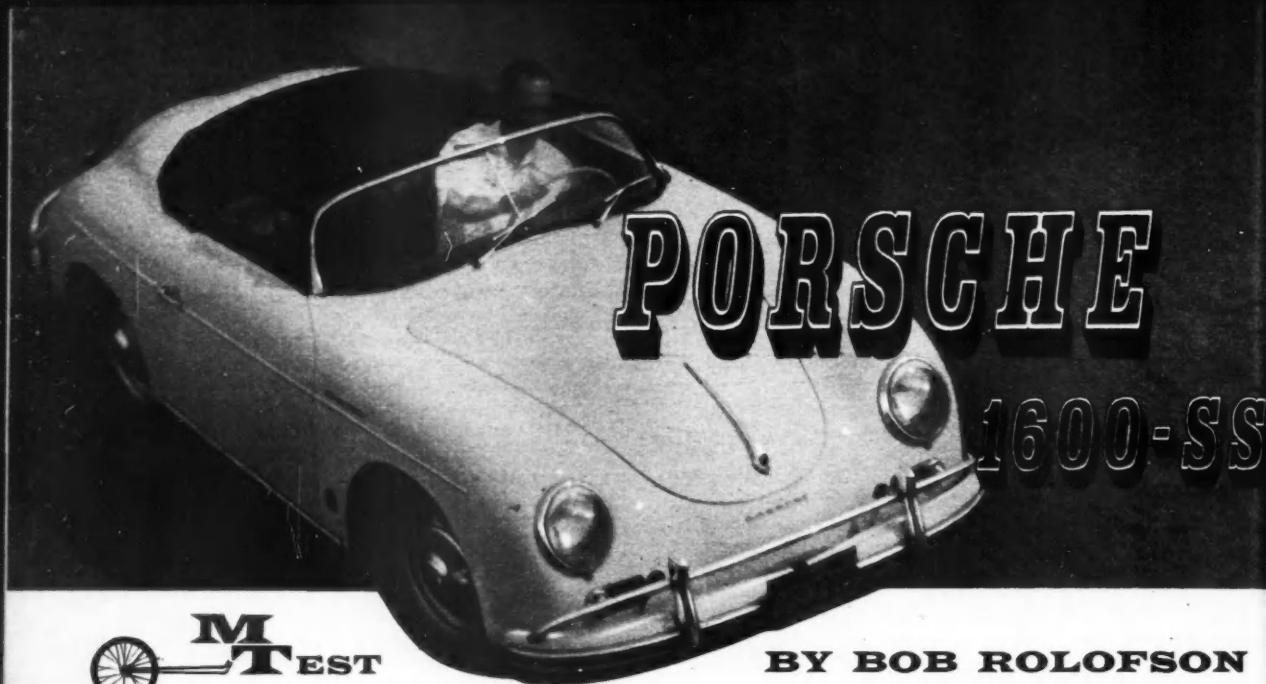
BRAKING

Withstood 19 slowdowns from 60 mph to 20 mph and one panic stop without fade or swerve.

2000-1958 Sunbeam Rapier

NEW "RALLYMASTER" ENGINE develops 73 bhp through reboring, higher compression, larger valves, and an extra carburetor. Accessibility to the components is good.

EVEN ON COLD DAYS, the Sunbeam Rapier can be driven in comfort with the top in coupé-de-ville position. With the top completely down, the automobile has sporty look.



BY BOB ROLOFSON

IN ALL FAIRNESS, I must start off by admitting that I have been a Porsche-hater for lo these many years. Therefore, it was with misgivings that I wheeled a 1600 Super Speedster from the spotless confines of Competition Motors in Hollywood. Some 14 days later (under much pressure) I reluctantly returned the beautiful little car — a fresh convert to the ever-growing congregation of avid Porsche worshipers.

It seems that while I have been nursing memories of the old unpredictable post-war models, Dr. Porsche has been busy rearranging the innards of his silver spoons without carving up the exterior. Capitalizing on the example set by Daimler-Benz, Dr. Porsche has been using his racing teams to develop the touring Porsche. By rearranging the chassis member, the Porsche engineers have been able to mount the rear shocks (à la Spyder) into a vertical position, im-

PADDED, COMPLETELY SPRUNG SEATS are easily adjusted for both rake and legroom. These are bucket-type coupe seats, optional equipment at \$45 extra.



prove steering geometry and add a hydraulic steering-damper, use new tie rods with reinforced linkage, and a new type stabilizer. In addition, the windshield is larger, the floor is lower for easier entrance, the dash is uncluttered, with instruments in a hooded grouping directly behind the wheel. A trip indicator, combined starter-ignition switch, push-pull handbrake, an idling adjustment knob on the dash, and a headlight flasher on the steering wheel, complete the picture.

Contrary to the opinion that sports cars must have stiffer springing, Porsche has proven that roadability is improved through softer springing. This theory, combined with the 88-hp 1600 engine and the suspension components taken from the Spyders, has produced new improved handling characteristics. It is still a different breed of cat on the road. It can't be typed as mushy, tenacious, or like being-on-rails; it's just pure Porsche. At slow speeds the car handles on a curve like any other car, except that it is unusually stable. At speed, the car comes into its own. Instead of all four wheels tracking, the rear end begins to slide toward the outside of the curve . . . begins to slide. Unlike the older models this slide is not a sudden breakaway, but casual, controllable two-wheel drift which allows the driver to set the car up

ACCELERATION

From Standing Start
0-45 mph 6.7 0-60 mph 10.1
Quarter-mile 18.3
Passing Speeds
30-50 mph 4.5, 45-60 mph 4.7, 50-80 mph 13.7

CRUISING SPEEDS

Maintains constant speed of 60-65 mph easily, 70 mph where legal

TOP SPEED

106.2 mph

FUEL CONSUMPTION

Stop-and-Go Driving, 24.9 mpg for 354 miles
Highway Driving, 28.30 mpg for 221 miles
Overall Average, 25.2 mpg for 575 miles
Fuel Used: Mobilgas

BRAKING

Withstood 19 slowdowns from 60 mph to 20 mph and one panic stop without fade or swerve.



THE LUGGAGE COMPARTMENT, located up front in place of the usual position of the engine, is difficult to use because of the forward-mounted spare tire. Note the tools.



ENGINE ACCESSIBILITY leaves much to be desired because of the unusually small rear deck lid. The components themselves, however, do not require a very long reach.

on tight turns. A touch of the throttle, a slight turn of the wheel and the tail swings into line for straightaway acceleration. You find yourself going miles out of your way looking for curves to play with, and before long are deliberately forcing the SS into four-wheel drifts, just for the fun of it!

Aside from the actual fun of playing with the SS, it is a touring machine par excellence. Steering is of the fingertip variety — no need to grab and wrestle. On a flat section of the freeway the car tracked, hands off, for three-quarters of a mile! During my two weeks with the SS, the skies opened, and the California dew became much too heavy for pleasurable highway testing. However, in 354 miles of traffic driving the car averaged 24.9 miles to the gallon. This indicates that open road cruising between 60 and 70 mph should produce from 28 to 30 miles per gallon.

One of the criticisms of the older models was idling noise and vibration. The SS gurgles like a twin-screw Chris-Craft, with almost no vibration, and even at speed there is no objectionable noise in the cockpit. The four-speed all-synchro transmission works like a hot knife through butter, fully justifying its use by Ferrari and Maserati in their racing juggernauts. Common in Europe, but new in the U.S. is the dimmer switch on the steering wheel. Tapping the "horn"

flashes the lights, the ring working the horn. A handy gadget for passing in competition and relieving some of the strain of highway driving at night.

On the negative side, it becomes quite a struggle shifting into reverse. The push-down and throw-over, while fighting a spring-loaded gate, is out of keeping with the rest of the car's operation. The top is the fastest and easiest "one man" manual canvas yet, but with it up a feeling of claustrophobia sets in immediately. Even when bending down and peering out of the rear and side openings, there are still two large blind spots on either side of the rear window.

The construction and finish of the Porsche (bodies by Reuter) are beyond criticism. From the solid whopp of the doors shutting, to the magnificent adjustable seats, the car is finished like a sample for the European auto shows. /MT

THE TOP IS AS SIMPLE to raise as it looks. It gets our praise as the fastest "one-man" top ever seen on a sports car. When top is up, however, claustrophobia may set in.

SPECIFICATIONS

ENGINE: Opposed 4, air-cooled. Bore 3.25 in. Stroke 2.91 in. Stroke bore ratio .89:1. Compression ratio 8.5:1. Displacement 96.5 cu. in. (1582cc) Advertised bhp 88 @ 5000 rpm. Max. torque 86 lbs.-ft. @ 3700 rpm.

TRANSMISSION: 4-speed all synchromesh gearbox. Overall ratios: 3.18:1, 1.76:1, 1.13:1, 0.815:1.

CHASSIS: Front suspension — trailing links and transverse laminated torsion bars. Rear — swinging half-axes, transverse torsion bars and trailing arms. Brakes — two leading shoe front hydraulics, ribbed alloy drums with cast iron liners. Ross-type steering gear, with 33-ft. turning circle, 2 1/4 turns lock-to-lock.

DIMENSIONS: Wheelbase 82.7 in., overall length 135.0, overall height 51.0, overall width 65.0, front tread 51.0, rear tread 50.0, weight (dry) 1790 lbs.

PRICE (port of entry): \$3715

ACCESSORIES: Coupe seats \$45, side curtains \$10.



Photos by Bob D'olive



CARLO ABARTH STANDS ALONGSIDE CONVERTED FIAT WITH ITS RED-STRIPED MARKINGS

OUT ON THE VIA TRECATE in Turin, deep-chested Carlo Abarth has built up a nice business promoting deep breathing by internal combustion engines. His multi-carburetor manifolds and low-loss exhaust systems persuade extra power from most Italian production engines and a large number of foreign ones. Conversion sets are available for the British Ford Zephyr and Austin A-30, for France's Citroën, Simca, Dyna Panhard and Peugeot 203, and for Germany's Volkswagen, Mercedes 180 and 220, and Borgward Isabella. His silencers are standard equipment on Alfa Romeos and Ferraris. The constant demand for Abarth transformation magic keeps 110 workers busy.

The innumerable competition successes gained by Abarth products, combined with Abarth's German origin, might lead one to expect elaborately instrumented laboratories with air-flow rigs, meters for measurement of gas flow, manometers and pressure gauges to plot pressure patterns and phonometers for

sound measurements, but the results are obtained with practically no equipment other than a test bed and dynamometer. Abarth evolves manifolds and silencers as the Italians design coachwork — by eye, experience and instinct. When he has made up half a dozen experimental sets of equipment, he and his staff will adjourn to the Autostrada with the car concerned to try them out. He often makes up to 10 or a dozen different designs before he gets the results he requires on a new model. For the Porsche he tried out 18 different exhaust systems before he was satisfied.

Silencers are mainly the absorption type with perforated straight-through pipes wrapped in glass wool but there are endless combinations and pipe arrangements to give the results required for particular cars. The empiric approach slows the work in winter when road tests may be held up for weeks at a time by bad weather which brings ice and snow to the Autostrada.

Besides plugging competition success,

Abarth brings a highly developed cosmetic approach to the selling of dull objects. To look at his silencers with their crackle enamel, chromium tailpipes and gaily colored scorpion badge, one feels they must be an asset to any car. It is the same with the inlet manifolds and carburetor sets. The sales effort is backed up with attractive modern stands at the motor shows and lavish colored literature. The most complete Abarth Turismo 750cc derivation of the Fiat 600 saloon sells as a complete car fully modified for about 50 per cent more than the standard model. Over 150 have been sold. Parts are also available in kit form for about \$392 retail price in Italy. The kit transforms the little Fiat into a serious competition car which can leave even an 1100-TV behind and has already gained many racing and rally successes. So spectacular is its performance that Fiat insists it shall bear a red stripe on the hood and a red flash on the sides to short-circuit complaints from owners of standard models.

The modification treatment is extensive. Cylinder bore goes up one millimeter with high-compression pistons which have light wristpins and special rings. Displacement is 45 cubic inches. With a 9 to 1 compression ratio, power output is 40 bhp at 5500 rpm as against 21.5 in the normal Fiat 600. A new counter-balanced crankshaft increases the stroke from 56 to 64 mm and carries a lightened flywheel. A special camshaft in steel is used and a cylinder head is modified, with polished internal inlet manifold and larger flange opening, to take a Weber 32 DRNP-2 carburetor. Lighter valves, a new pinion for the oil pump, light alloy pulley for the generator and larger radiator figure in the program. A new drive ratio is supplied for the speedometer, recalibrated up to 88 mph. Exhaust is a four-branch system with twin tailpipes.

The clutch gets stronger springs, and a new crown wheel and pinion give a rear axle ratio of 4.55 to 1 against the normal 5.375. The compact little Fiat sedan already has fine handling qualities; when endowed with practically twice

ABARTH

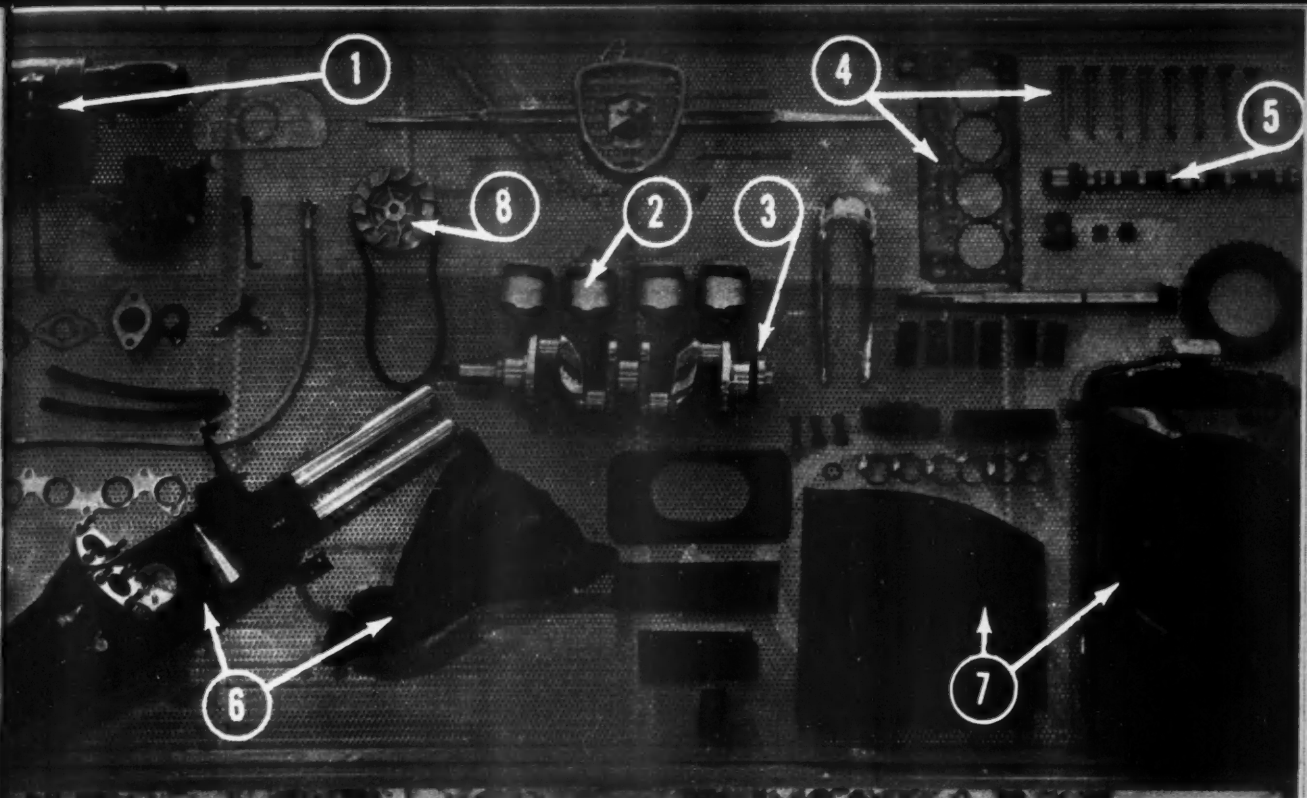
by Gordon Wilkins

Deep-Breathing Engine Conversion

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ABARTH ENGINE conversion equipment shown here in-
cludes (1) air filter for Weber carburetor, (2) piston
with deflector top, (3) special counterbalanced crank-

shaft, (4) lighter valves, special gasket, (5) special steel
camshaft, (6) four-branch exhaust manifold and silencer,
(7) larger radiator, and (8) aluminum generator pulley.

the normal power it becomes fantastic-
ally quick on winding roads or through
heavy traffic. It tears up and down the
Alps and buzzes its way through the
pack on the Autostrada as lithe as the
little lizards that play in the Italian sun.
The quick and easy gearshift, light
steering and responsive engine that
sends the rev counter needle flashing
round like a whiplash, make it natural
for the Fiat to be first away at the lights

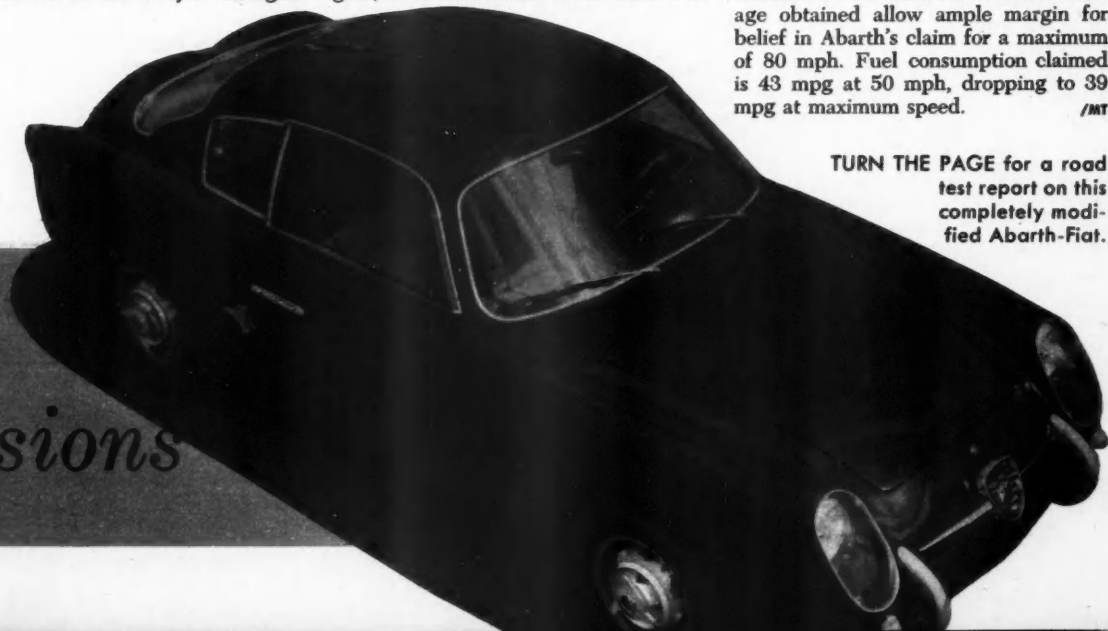
and first through any opening in traffic.

I tried two cars and was eventually
able to make some quick performance
checks on one with a final drive reduc-
tion slightly greater than normal, which
increased the revs and noise somewhat.
The little engine growling happily in
the rear went straight up to 6000 rpm
in all gears without the slightest hesita-
tion, giving road speeds of 47 in first
gear, 65 in second and 77 in third. The

average of several runs from 0 to 50
using first three gears was an astonishing
11.8 seconds and the average of several
flat-out runs over a kilometer on the
Autostrada in two directions was 83.37
mph. During this time the engine was
doing 6550 rpm with no sign that this
was the limit of its capabilities. It is
known that not all kilometer posts on the
Autostrada are correctly spaced, but the
number of runs and the excellent aver-
age obtained allow ample margin for
belief in Abarth's claim for a maximum
of 80 mph. Fuel consumption claimed
is 43 mpg at 50 mph, dropping to 39
mpg at maximum speed.

/MT

TURN THE PAGE for a road
test report on this
completely modi-
fied Abarth-Fiat.



on versions

ABARTH-FIAT 750

NOT SINCE DRIVING the Moretti coupe have I seen so many people gawk in admiration as I drove by, and not since the first TR-2 arrived have I had so much fun just driving around — all this in a beautifully styled Abarth-Fiat coupe.

Entering the tiny machine for the first time (point your derriere and drop in) is a surprise. For a car sporting an overall length of 11 feet, a height of 3 feet 10 inches, and weight of 1200 pounds, the Abarth has an unbelievable amount of usable space. A six-footer (once he's in) can push the plush bucket seats back until he can just toe the pedals and hold the beautiful competition wheel at arm's length — with plenty of space behind the seats for luggage.

Lineage of this miniature "Maserati Coupe" is all Italian. Abarth buys stock Fiat 600 chassis (complete except for body) and reworks the Fiat engine to accept the "Deriva-

appear ridiculously small, but it took 17 successive stops (each measured on a deceleration meter from 60 to 20 mph) before slight fade and odor appeared. The 18th stop was an all-out panic stop, bringing the car to a tire-ripping rest from 60 mph; no swerve — hands off!

The Abarth-Fiat 750 cars figure strongly in the Abarth factory's fantastic competition record. Most recent of their European conquest was the clean sweep of overall and class awards in the tough, icy, mountainous, Sestriere Rally — beating a parade of the world's mightiest rally cars. In their U.S. debut at Sebring, five cars were entered, with four finishing the tough grind. In their class one took first in Gran Turismo, and another came in third in sports. One of the winning cars was driven to Key West, and then straight to California. Arriving on a weekend, they entered the Santa



ABARTH-FIAT DRIVERS CAN LOOK UP AT ALL DRIVERS. CAR IS COMPLETELY DOCILE IN HEAVY TRAFFIC.

tion Abarth" kit. The chassis is then carted to the Zagato factory in Milano, where it is pared to accept their streamlined body shell. The aluminum coachwork, featuring a typical Zagato "double hump" in the top, is a sample of Italian coachwork at its best — there is even a roll bar built into the top and padded with leather! The dash has been sprayed flat black to avoid reflections, and is strikingly simple and uncluttered. The tachometer, speedometer, water temperature, fuel and oil gauges are clustered in three large dials under a shroud over the steering column. The four-speed Fiat gearbox is synchromesh in second, third, and fourth and is controlled with a short, snappy, floor-mounted shift lever. On top of a structural floor tunnel, between the seats, is a fly-off emergency brake. Between the shift lever and brake are the two stock Fiat levers controlling the starter and choke. An efficient heating system forces hot air (from the rear-mounted engine) through the floor tunnel, where it is exhausted through vents near the floor boards. This same system directs air from the tunnel through flexible tubes, to the defroster slots below the windshield. The curved windows roll down into the doors, leaving fixed panes behind the seats. Air is exhausted from the cockpit through scoops sculptured into the sides of the rear window pillars.

Performance? What can you expect of a 45.5-cubic-inch engine? In an untuned demonstrator I turned a speed of 74.1 mph in the standing quarter and a top of 99 mph (at which point I ran out of room) at just over 5000 rpm. With this sort of performance, the Abarth can easily play tag with most anything in the 1500cc class. The little engine barks like a miniature Ferrari, and took 6200 rpm through the gears with no apparent strain. The 8½-inch stock Fiat brakes

Ana drags, taking first in sports under 1500cc. The car was then driven to the SCCA National Sports Car Races at Palm Springs, where it took second in the under-1500cc race. All this with no engine overhaul and no brake adjustments. There is no doubt about it, the Abarth-Fiat is not only sensational — it's big for its size!

/MT

ACCELERATION

From Standing Start
0-45 mph 8.9 0-60 mph 15.6
Quarter mile 20.9 (74.1 mph)
Passing Speeds
30-50 mph 6.5 45-60 mph 6.7
50-70 mph 10.2

CRUISING SPEED

60-70 mph (80 if law allows)

TOP SPEED

99 mph at just over 5000 rpm
(indicated 104 mph)

FUEL CONSUMPTION

Stop and Go Driving
23-25 mpg for 516 miles
Highway Driving
40-45 mpg at cruising speed
Overall average
29.5 mpg for 795 miles

BRAKING

Withstood 17 slowdowns from 60 mph to 20 mph and one panic stop without fade or swerving.



REAR-MOUNTED ENGINE IS COMPLETELY ACCESSIBLE FOR TUNING.



Photos by D'Olive and Rolofson

KNOCK-OFFS, FOUR BOLTS REMOVE THE TIRE.



THE PLUSH BUCKET SEATS ARE FULLY ADJUSTABLE FOR LEGROOM.



ONE JACK-POINT SERVES EACH SIDE AND IS EASY TO OPERATE.

TINY ABARTH-FIAT ACTUALLY HOLDS FIVE AS PROVEN BY ROLOFSON CLAN, WHO TOOK 175-MILE TRIP IN COMFORT.



M TEST BY BOB ROLOFSON



driving
around



with
walt
worn

INTRODUCTION TO ITALY WITH ITS COUNTLESS SCOOTERS AND BIKES CAME IN DOWNTOWN MODENA WHILE TAKING A FIAT TAXI.



STROLL AROUND the piazza and see myriad "customs," but be wary at numerous circular intersections (below).



CONTRAST: "Custom bodies" on two lines in new Farina Italian factory (top) and dormant Maseratis (above).



ITALY

LAND OF FAST DRIVERS... FAST CARS... FETTUCINI... FASCINATING FACTORIES... FETCHING FEMALES...

UNTIL A FEW MONTHS AGO Italy conjured up for me a vision of spaghetti and meatballs, pizza pie, fast cars, beautiful women, and "Arrividerci, Roma." Since my visit through the northern part of the country, I have a new picture. In it I've substituted tortellini, fettucini and saltimbocca for the American version of Italian dishes, added fast drivers to the fast cars and the slow ones, and *even more* beautiful women.

Liberal sprinkled over this picture is a variety of subjects older than yesterday, and newer than tomorrow, an assortment of automobile factories that produce as few as 12 cars a year and as many as 1300 a day, bicycle and motor-bike traffic to confuse your path wherever you go, and more custom-built small cars in one square on one day than you'll normally see in our country in one year. This to me is Italy, or at least the northern plains from Modena to Turin, the "Detroit" of Italy.

After completing our stay in Germany, the publisher and I boarded a night train in Stuttgart and headed across the Alps by way of Zurich, Switzerland to Milano, Italy. We'd wanted to drive his new 300-SL roadster to Modena, but time was creeping up on us, so we decided on the less interesting mode of transportation. I wish we hadn't.

Anyway, the next morning found us in Milano, where we switched trains. How we found the right one with no-one around who could speak English—even the station employees—I'll never know! But we got to Modena, managed to get our baggage off and into a waiting taxi (a Fiat, which we were to find was practically the order of the day). We checked into our hotel, had prosciutto, eggs and cappuccino (espresso with plenty of foamy cream), then climbed into another waiting taxi (Fiat, naturally) and since the driver couldn't make us understand *his* English, I thought I'd try *my* Italian.

I don't know which was worse, but to my command of "Officine Alfieri Maserati" I at least got the questioning reply of "Macchina?" Thinking I knew what he said, I replied, "Sì, macchina. Automobil." And off we were (I hoped) to the Maserati factory, dodging bicycles, horse-drawn carts, scooters, and pedestrians, with the right of way seeming to go to him who honked the loudest.

At the factory we introduced ourselves to Signor Aurelia Pollio of the Press Department, who graciously dropped everything to take us on a tour of the factory. I'd had a preconceived notion that Maserati was somewhat larger than the Kurtis race car factory in Glendale, Calif., but was in for quite a surprise.

Adjacent to the front offices was a shop empty of workmen, but filled with three of the latest three-liter sports cars, 12 other late models, and several earlier two-liter sports jobs. These belonged to customers from all over the world who were having them refurbished for one reason or another. Adjoining this shop, which in itself was as large as the present Kurtis

plant, was a smaller one for Maserati's own race cars. At the moment it was practically empty, for the race cars were still at Casablanca, where they'd come in first, fourth, fifth, and sixth. (And to think they've since quit racing!)

Completing the remainder of this older building was the test shop, where all engines are placed on a dynamometer for a thorough check-out before being placed in any chassis. Here we had the pleasure of meeting Ing. Julio Alfieri, Director of the Automotive Dept. of Maserati, and Omar Orsi, "the master of all production." On test at the time was a beautiful six that screamed to 6000 rpm in the most fascinating manner, and a new Formula I V-12 awaiting test.

In a modern, spacious building adjoining the main works we saw engines being assembled with the same loving care a diligent mother uses in changing her first baby's diapers. All parts are machined on Maserati lathes, drills, and milling machines; a larger portion of the factory is reserved for that while another section is devoted to production of these same machines that build the engine parts—and parts for the machines themselves!

The assembly line, as such, had not yet been set up, but it was the intention to do so and produce Gran Turismo 3.5-liter cars at the rate of two every three days. Since that time, a government-owned bank has reportedly moved in. There is now some question as to what will be produced—and how often.

Making the absolute most out of our stay in Modena, we went into the downtown area to visit the Ferrari service center. We had heard all sorts of stories on how hard it was to get into the works, and especially to see the old master, Enzo, but our greeting there made us feel they'd been expecting us for days. Signor Ferrari was at the factory in Maranello, some eight miles out of town, so after looking over the \$500,000 stockpile of cars and equipment (give or take a few thousand), the trophy room (a 10 by 15 room crammed with trophies from every conceivable event), and Enzo's private office, we were off to Maranello.

The factory at Maranello is relatively new (Ferraris have been produced only post-war), is triangular-shaped with the center taken out, the base and one of the legs housing the machine and assembly works, while the other leg houses the foundry, test stands, and racing shop.

Since we described the Ferrari operation in some detail in our Feb. '58 issue, I won't repeat it here. Suffice it to say, however, that the caliber of work was on an equal footing with that of Maserati—which puts it more than a cut above the best. I saw a crankshaft that I mistakenly assumed to be a smoothed and polished one. "Oh, no," I was told. "That's in its first operation." Seems they look that good when they're first hewed out of a chunk of bar stock. Further on I saw a mechanic

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DRIVING AROUND continued

polishing one with crocus cloth. It looked like it should have been an intricate part of some huge Swiss watch!

Some 200 miles west of Ferrari and Maserati is a factory that's as different from these two as a bowl of wax fruit is from the real

engine every 45 seconds. After the engines are assembled they are tested alone, run in, coupled to the transmission, then put into the car and tested as a whole unit.

All cars get a brief inspection. Ten per cent at random are selected for test on the proving ground; another five per cent are tested on the road. The proving ground "test" consists of a few laps around the 2½-mile oval that includes a 27-degree and 45-degree bank, cobblestones, bricks, rough asphalt, dirt, and railroad ties. They don't use these for testing prototypes, which instead are run over roads throughout all of Europe for at least 12 months prior to being placed into production.

When you see that 90 per cent of the cars on the streets of Italy are Fiats, you might naturally wonder, as I did, if the factory is state-owned like Renault of France. My question on this was answered this way: "Fiat is not

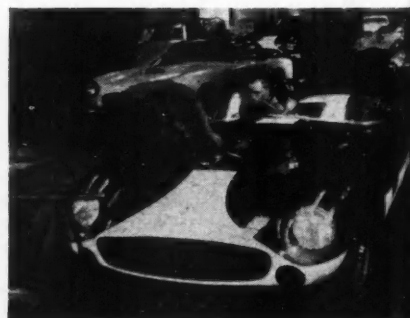


FIAT with special touring body is highly reminiscent—despite its smaller scale—of 1937 Ford station wagon.

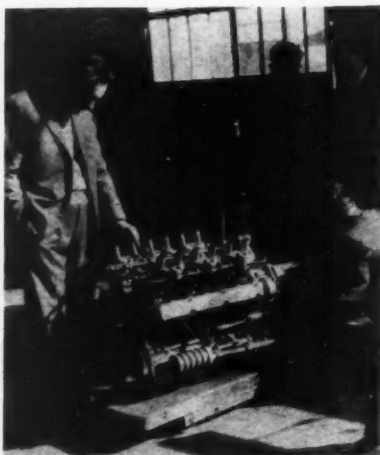
thing. First of all, to keep from wearing ourselves out during the tour, we were put in an open, wooden-sided Fiat 1100, made after the last war for just such things.

The main Fiat plant employs 17,000 workmen in two eight-hour shifts producing 1300 cars per day. Of these, 25 per cent are exported, with 24,000 presently coming over to the States on a Fiat-owned ship. There's talk of increasing this when a second ship is built specifically for transporting cars.

In this plant Fiat makes its own dies, its own forgings, its own sheet steel. Conveyor belts are used throughout, with everything being completely automated. For the 600 block, for example, one machine on a line does 365 operations, producing one



FERRARI service center in Modena is jammed with fantastic array of cars.



COUNT ORSI (kneeling, right foreground) and Ing. Julio Alfieri (standing, left) study Maserati V-12 engine.

state-owned—though they are one of our good customers."

As to why more Italians don't own cars, it's the same problem throughout Europe—the price of gas. There it's 140 lire per liter, or \$1.12 per gallon. And we complain about a lousy 30 or 35 cents per gallon! /MT

next month . . .

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WHAT THE EDITORS SAY . . .

"Rod & Custom" magazine
—New Products Test, April, 1958

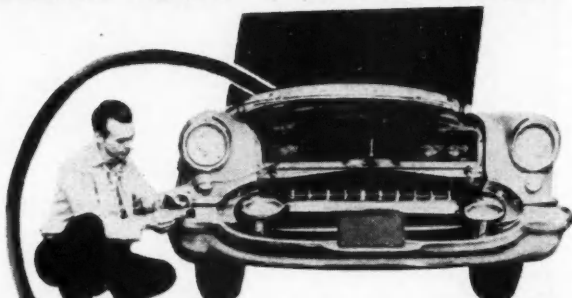
"Speedplater not only can be used to restore scratched, worn or blistered chrome on any part of your car, but can be used to plate metals not chromed before . . . For those wishing to plate their own items right at home without having to depend upon a commercial chrome shop, we'll vouch for the Speedplater's doing the job by saying that it works exactly as described giving a lasting, durable, bright coating."

WHAT USERS SAY . . .

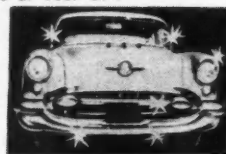
AMAZING NEW SPEEDPLATER has already plated thousands of cars with Extraordinary Results. Here's what users say: "To say I am pleased is putting it very mild. I have got more work than two of us can do . . ." F. S., Kokomo, Ind. "The Speedplater is certainly one of the most useful devices ever placed within the motorist's reach. It does everything stated for it and does it exceptionally well. There's no poor chrome on my car now." D. C., Elmhurst, N.Y.

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MOSS—GIANT KILLER

continued from page 34

with him, and no one gave him even an outside chance of winning. Walker flew the car and Francis out to Buenos Aires just in time for practice, but as soon as it arrived, Moss knew it was not equipped for long-distance racing. There were very few tires and even if there had been plenty of them it would not have helped during the race, for the car had bolt-on wheels which would take minutes to change. The front wheels carried the wheel bearing races and took 20 minutes to change! Even worse, the tires, little 5.50 x 15 covers, chosen for short-distance racing on British airfield circuits, were obviously too small for long distances.

As expected, Fangio made the fastest lap on the first day of practice but to everyone's astonishment Moss was second best. Next day he shared third best time with Collins, but he now had plenty to worry him, for the tire technicians warned him that driving at that rate his tires would last 36 laps—and the race was 80 laps long, a total distance of 194 miles! As if this were not trouble enough, Moss appeared on the last practice day with a bandaged eye. His wife Katie, skylarking around with him, had somehow managed to poke a finger in his eye. This was the day which decided the starting positions and Moss was only seventh fastest, so he got a poor position on the grid. The Ferrari and Maserati outfits, who had been rocked by the unexpected speed of the little Cooper, now began to breathe more

ground. Behra and Hawthorn were fighting a private battle for second place and Moss, who had started slowly, had dropped to fifth place after a short struggle with the Cooper's complicated gearshift. Said he afterwards, "I knew I had to drive to finish and save every scrap of rubber right from the beginning of the race. I had to cut out all possible wheelspin, so I decided to go slowly around the slow corners, never dropping below third gear. At the apex, the engine would go 'bobbie, bobbie, bobbie' and then pull away cleanly and I didn't lose too much time. But it was no use trying to save the tires on the fast corners as I should have lost too much time."

There's a lesson here, incidentally, for new drivers. Speeds don't vary much on the slow corners and an effort to snatch a fraction of a second may easily induce a spin. Motor races are won on the fast corners taken at 100 mph and over. An extra five mph gained here not only saves time on the corner, it saves seconds on the run in and the run out.

Two things helped Moss: the amazing flexibility of the little Climax powerplant, which produces a real punch over a wide speed range, and the light weight of the car (a mere 875 pounds). As a result he was steadily gaining time in acceleration out of the corners.

With Fangio comfortably in the lead, followed by Behra, Hawthorn and Musso, the race had settled into its expected pattern but Moss was now turning on the heat. He took Musso and set off in pursuit of Hawthorn. The blond Ferrari driver had no intention of being passed by the impudent English miniature, but after three laps Moss nipped past and went in pursuit of Behra. At 29 laps Hawthorn stopped at the pits frantically signalling a loss of oil pressure and he dropped back to fifth place while his oil tank was topped up. The order was now Fangio, Behra, Moss, Musso and Hawthorn, with the rest scattered somewhere in the rear. Fangio's lead seemed secure but he kept on going faster and eventually set a new lap record in 1 minute 41.8 seconds at 85.86 mph. Moss took Behra and at 32 laps the reason for Fangio's haste was revealed. The new abrasive surface on some of the corners had been tearing his tires to pieces and he stopped for 42 seconds to change rear wheels. While he sat there Moss calmly sailed into the lead! And when Behra spun soon afterwards he was right out there alone, still riding his personal tightrope, driving fast enough to win, but slowly enough to hold his tires together to the finish. At half distance the order was unchanged, but eight laps later there was frantic activity in the Maserati pits as Behra and Menditeguy arrived together to take on new rear wheels, so it was Moss, Musso, Hawthorn, Fangio and Behra, with the World Champion's car no longer giving its peak performance.

EVERYTHING NOW HUNG on the fast-disappearing film of rubber on Moss's rear tires,

and every time he passed the pits Alf Francis watched the tires in breathless anxiety. With 14 laps still to go, the treads began to break up, and with seven laps still to go they were in shreds. Moss later told me, "Twenty laps from the end I had a 35-second lead over Musso but this was dwindling fast as I tried to hold my fraying tires together. I was now doing everything I knew to save rubber. I looked for every patch of oil and drove into it. In the corners I chose the most slippery parts where there were the heaviest deposits of tread rubber. I even considered driving on the grass verges, but decided against it for fear of catching my sump on the curbs."

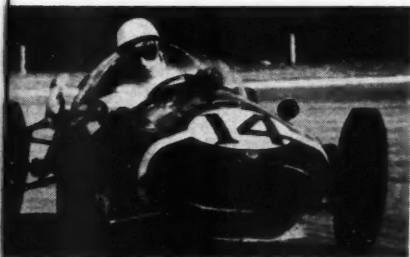
Alf Francis was keeping Moss informed as Musso steadily wore down his lead but suddenly, the Italian caught sight of the fleeing Cooper and went after it like a dog after a rabbit. The last few minutes passed in an agony of suspense as Moss strove to stay ahead. He crossed the finish line on the threadbare canvas of his rear tires a mere 2.7 seconds in front of the Ferrari!

IT WAS A DRIVE that made history in many ways. A private entry had won a Grande Epreuve; it was by far the smallest and least powerful car in the race and the smallest car ever to win a top-ranking international Grand Prix. But it was also a historic lesson in race planning and intelligent, disciplined driving; an exhibition of cool courage and calculating nerve, for Moss had taken hair-raising risks with full knowledge of the possible consequences. "Were you frightened?" he was asked afterwards.

"Not really," he answered. "In racing I try to avoid doing things which really frighten me. I size up the possibilities and try to keep a safety margin in hand. The things which shake me are those which happen unexpectedly." Looking at the few threads of canvas which remained between him and possible disaster at Buenos Aires I felt that the "margin in hand" can sometimes be infinitesimally small.

But there are many more details which make this one of the most improbable victories of all time. The switch from alcohol to gasoline had caused major upheavals in the racing experimental departments. Vanwall engineers were still struggling with injection troubles and burned valves caused through loss of alcohol's powerful cooling effect. Compression ratios were being reduced and power outputs were being maintained only with difficulty. But with the Cooper there had been no chance to get down to scientific preparations. Alf Francis simply took the engine after it had set up a new lap record on alcohol at Brand Hatch at Christmas, got out his box of carburetor jets, selected smaller ones, put in some plugs with slightly higher heat resistance, and said, "That'll be all right"—and it was. No change of pistons; no alterations to the valves; no change in compression ratio which stayed at 12 to 1.

And because the tire situation was so critical there was no chance to do any proper fuel consumption checks before the race. Alf simply slung 80 liters (21 U.S. gallons) into the tank and hoped for the best. At the end, thanks to Moss's special driving technique, there were 35 liters (9¼ gallons) left. The car had won the race with a fuel consumption of 16 miles per gallon! /MT



COOPER CAPER by Stirling Moss was "greatest thrill" of Argentine GP. The small machine "looked silly" among the larger cars, said mechanics.

easily again and consoled themselves with the thought that it couldn't possibly last the full race distance.

AS THEY LINED UP, Collins, Hawthorn and Musso had the Ferraris, and five works-prepared Maseratis were handled by Fangio, Behra, Menditeguy, Godia and Gould.

As the flag dropped, Collins snapped a driveshaft off like a carrot and stayed where he was, while Behra shot away into the lead. After five laps, Hawthorn moved up to dispute the position but was soon brushed aside by Fangio, who went ahead steadily to build up his lead and seemed all set to secure his customary victory on his home



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SUNBEAM RAPIER

continued from page 43

SPECIFICATIONS

ENGINE: 4-cyl. in-line ohv. Bore 3.11 in. Stroke 3.0 in. Stroke/bore ratio 0.99:1. Compression ratio 8.5:1. Displacement 91.13 cu. in. (1494cc). Advertised bhp 73 @ 5200 rpm.

TRANSMISSION: 8-in. dry single-plate clutch, hydraulically operated. 4 forward speeds, top 3 synchronized. Overall ratios 3.2:1, 2.5:1, 1.5:1, 1.0:1.

CHASSIS: Unit construction. Front suspension—dependent, coil and wishbone. Rear—semi-elliptic. Tubular shocks all around. 5.60x15 tires. Lockheed hydraulic brakes, 10-in. in front, 9-in. in rear. Burman F-type recirculatory ball steering. 2½ turns lock-to-lock, with 34¼-ft. turning circle.

DIMENSIONS: Wheelbase 96.0 in., overall length 162.5, overall height 57.5, overall width 60.8, minimum clearance 5.8, front tread 49.0, rear tread 48.5. Weight 2276 lbs. (with gas, oil and water).

PRICE (port of entry): \$2699.

ACCESSORIES: Radio \$75, overdrive \$159, clock \$20.

ABARTH-FIAT 750

continued from page 48

SPECIFICATIONS

ENGINE: 4-cyl. ohv, pushrod-operated, water-cooled, rear-mounted. Bore 2.4 in. Stroke 2.5 in. Stroke/bore ratio 1.04:1. Compression ratio 9.8:1. Displacement 45.5 cu. in. (747cc). Advertised bhp 43 @ 5800 rpm.

TRANSMISSION: Dry, single-plate clutch. 4 forward speeds, top 3 synchronized. Overall ratios: 3.38:1, 2.06:1, 1.34:1, 0.89:1. Rear axle ratio 4.875:1. Transmission to rear wheels through two half-axes connected to differential by universals. Final drive gears incorporated in gearbox.

CHASSIS: Fabricated from sheet metal, integral floor. Body of aluminum by Zagato. Front suspension—dependent with transverse leaf springs. Rear—dependent with coils. Hydraulic telescopic shocks all around. Self-ventilating disc wheels with Pirelli 5.20x12 tires. 8½-inch hydraulic brakes on all 4 wheels—lever on tunnel. Worm and segment steering.

DIMENSIONS: Wheelbase 78.8 in., overall length 132.0, overall height 46.5, overall width 53.0, minimum clearance 7.0, front tread 45.3, rear tread 45.5. Weight 1200 lbs. (42% front, 58% rear).

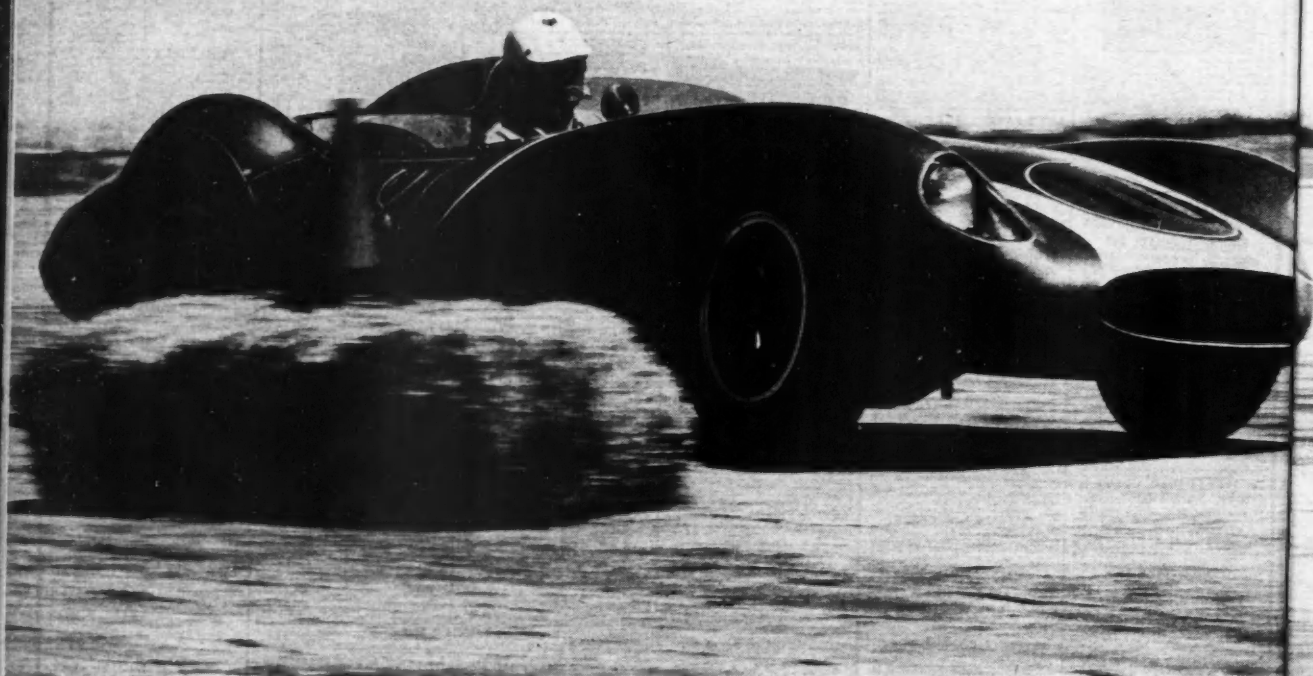
PRICE (port of entry): \$3460.

ACCESSORIES: Radio \$65, wheel discs \$16, Mille Miglia engine \$280.



"I think our main trouble is . . . most of the people who can afford them, can't fit them!"

MOTOR SPORTS PICTORIAL



FIRST PRIZE—Russ Kelly's striking photo of Reventlow's Scarab Mark I at Palm Springs takes top honors this month.

ANNOUNCING—Motor Sports Pictorial Photo Contest

Cash prizes for your racing and motor sports pictures. The editors of **MOTOR TREND** are looking for the three best photos or sequences of photos taken each month in the field of motor sports. And this includes all forms of motorized racing—sports cars, stock cars, motorcycles, drag racing, midget autos, sprint cars, speedboats—anything that is exciting and pictorial.

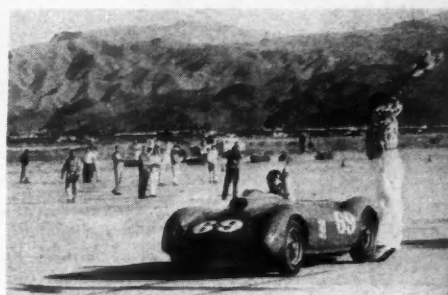
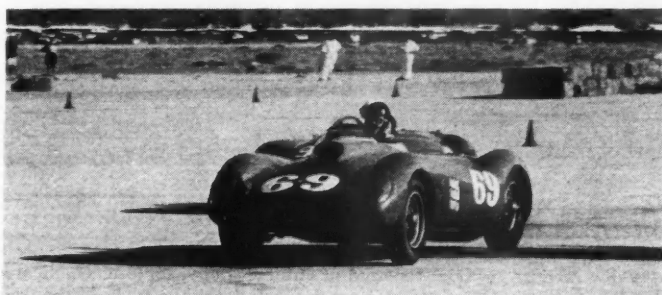
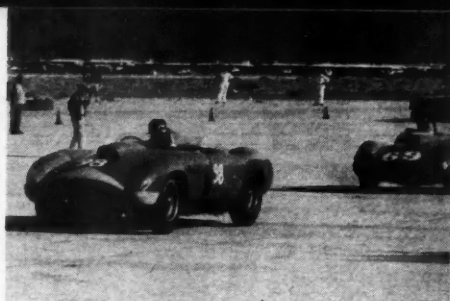
This month's winners should give you an idea of what we are looking for. Picture quality, good composition, current news value, and photos that tell a story are what we want.

First prize is \$25, second \$15 and third award is \$10.

If we select a picture sequence, we will pay the place award for the first photo plus \$7.50 for each additional picture used in the series.

Please identify all photos with names, dates, locations and pertinent caption data. Contest is open to amateurs and professionals alike. Photos should be black and white glossy prints, four by five inches minimum size. Please do not send negatives. Photos cannot be returned or acknowledged.

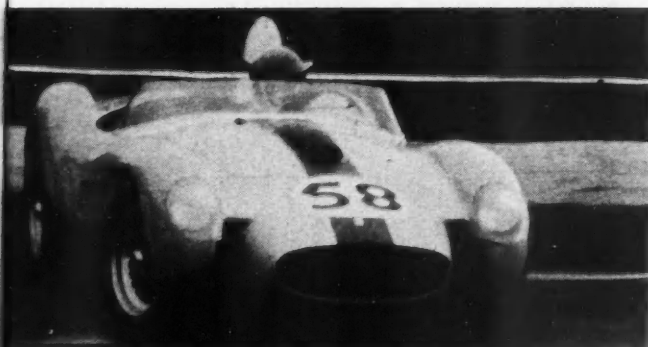
Send all entries to **MOTOR TREND**, Motor Sports Pictorial Contest, 5959 Hollywood Blvd., Los Angeles 28, Calif.



SECOND PRIZE—Lester Nehamkin's photos depict Palm Springs main event. Top left—Max Balchowsky, Buick Special (70), leads off, followed by Carroll Shelby (98) and Dan Gurney (69), 4.9 Ferraris. Top right—Shelby leads Gurney until (below) 19th lap when Gurney passes. Five laps later Gurney takes checker.



THIRD PRIZE—Gordon Wilkins' dramatic Goodwood, England pictures show results of brake failure on Jean Behra's BRM. Note exhaust system torn off car. Behra (l), with leg injuries, is aided by crewman.



GORDON WILKINS

BUSY MOMENTS at Goodwood chicane for Willy Mairesse in 3-liter Ferrari. He spins, hits wall and continues.



Want To Be a Race Driver?

ONE BEGINNING OF A RACING CAREER CAN BE IN THE QUARTER MIDGETS WHERE SMALL TRY CARS GET A START

At the time the following interview was conducted, 56 cars had been entered in the 1958 Indianapolis race—11 of them without drivers and nine of them with drivers who had not yet passed the rookie driver's test. Does this imply that there is a shortage in championship race driver material? This is possible and yet we receive many inquiries from young people as to how they can begin a career in racing. Sam Hanks seemed a logical person to ask. Here are his answers.—Editor.

Q. Sam, many of our young readers are thinking about adopting racing as a career. If you could go back to 1936, when you first started, would you do it all over again?

A. I've been racing for 21 years and if I had to live my life over again I'd definitely choose auto racing. I think it's one of the cleanest, finest sports that I've ever been associated with.

Q. How old do you think a prospective race driver should be before he starts racing?

A. Well, I think that a person should be interested in driving a car even when he's very young because—just take my case for example—I've been interested in engines and cars for years. However, I never ever dreamed I'd be a race car driver until I was about 20 years old.

The little quarter midget racing cars powered by two-horse-power engines for boys and girls from ages 4-13 offer the greatest driver training program available for any youngster, whether he intends to be a race driver or not. I think they'll grow up to be the finest drivers we've ever had on our highways because they'll have the know-how to handle their car under any condition, plus the fact that they also learn at an early age the mechanics of the automobile. This to me is very important, particularly if the individual intends to become a race car driver.

Q. How would you suggest young people get a start in racing?

A. It's tough to break into the racing picture today, and it's a real hard subject to get into. My advice would be—and I've given it to a few boys and I think they're going along with it—about the cheapest way they can get in is to start in probably the jalopies—at least it's a start. There is no set pattern of progress, but it usually works best this way: jalopies first, then go into the stock cars, then branch out into midgets. After you've become a good midget chauffeur you should go into sprint car racing and then you eventually come on up into the championship trail which will lead you to Indianapolis.

Q. You say jalopies are a good start—just how can a young fellow get on the track behind the wheel of one of these cars?

A. The best way is to purchase your own jalopy. When you're a beginner it's pretty hard to persuade someone to just give you a ride. I've seen two and sometimes three fellows pool their resources and build their own. I recommend this type of entry into auto racing because you have the responsibility of keeping

the car in perfect mechanical condition, which in turn means you do good or you don't.

Q. To build or enter a jalopy, some mechanical knowledge is needed—how does one learn the tricks of the trade?

A. In regards to the tricks of the trade, even our best present-day mechanics and drivers come up with new tricks every race, such as George Salih did for me in 1957. Don't worry about them—they will come with time and experience.

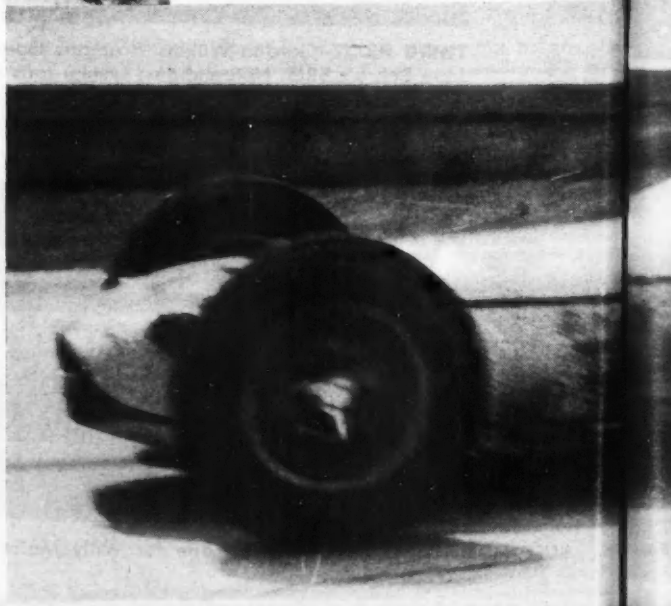
Q. In a jalopy, for example, how does a novice learn to drive in the hot competition on a track?

A. I believe the best way to start is to get on the race track by yourself during weekdays and learn the feel of your car. Practice till you know its every mood, then enter competition with the thought of learning for a while—not winning. Experience is what you're out to get, and believe me, it can't be beat!

Q. Assuming a young fellow is successful as a jalopy driver and wants to graduate to stock cars, is it better to build one up or try to get a ride in an owner's car?



Sam Hanks draws on



A. When moving up to stock cars it would be much easier to drive for someone else; however, if you cannot find a ride then again you're on your own. It may be expensive, but everything you win is yours and again you assume the responsibility of your performance. I'd like to inject this bit of advice right now on owning your own car: don't ever enter a race after wearing yourself out working on the car—skip a race now and then. Be sure of your work and yourself—it's the quickest way to the top I know. Everybody sees the bad races you run.

Q. How about getting started in midgets and sprints?

A. This is a good time to let someone else own the cars. It starts to become expensive from here on. The experience to be gained will be new to you, and having the help of someone who's been in the business for a while should be beneficial.

Q. What qualities does a race car owner look for in selecting a new driver coming up through the ranks?

A. If I were a car owner looking for a driver, the one I would choose would have to have a good mechanical ability; his driving background would show natural ability, good common sense. I would pick one who concentrates on his equipment and driving when racing.

Q. Now that you have retired from active racing, what in your frank opinion is the secret of getting through 21 years of racing without a major accident, as you did?

A. I think the reason I got through the entire 21 years of racing without any really serious accidents is the fact that I knew the equipment on my car and the condition of my car. In other words, I never gambled on tires, old axles, or anything like that. I would replace the pieces after I thought they had enough years of use on them, even though they magnaflexed o.k. Another thing too, I do an awful lot of far-ahead driving on the courses. There were probably a lot of races that I could have won, and this is true with many other drivers too, but I just didn't think the track or the conditions warranted the extra gamble to move up maybe one or two more positions. By far-ahead driving I mean that I'd come down the straightaways and I'd look into the corners to make sure the course was clear. So from a driving standpoint, I think that is one reason that I've had such few accidents.

Q. What about your physical condition—how much do you attribute to this your 21 years of intensive racing?

A. You must be in good physical shape. I would go to a gym three or four months before Indianapolis and work out to increase my endurance and strength. But having a strong body alone does not get the job done. You have to think ahead in driving—particularly race car driving—and also in everyday passenger car driving. Solid concentration is a *must*.

Q. Sam, what's the biggest single lesson you've learned from auto racing?

A. The biggest single lesson that I've learned from auto racing is to stay accident-free, which can be accomplished by concentration, knowing your equipment, being courteous and using your head.

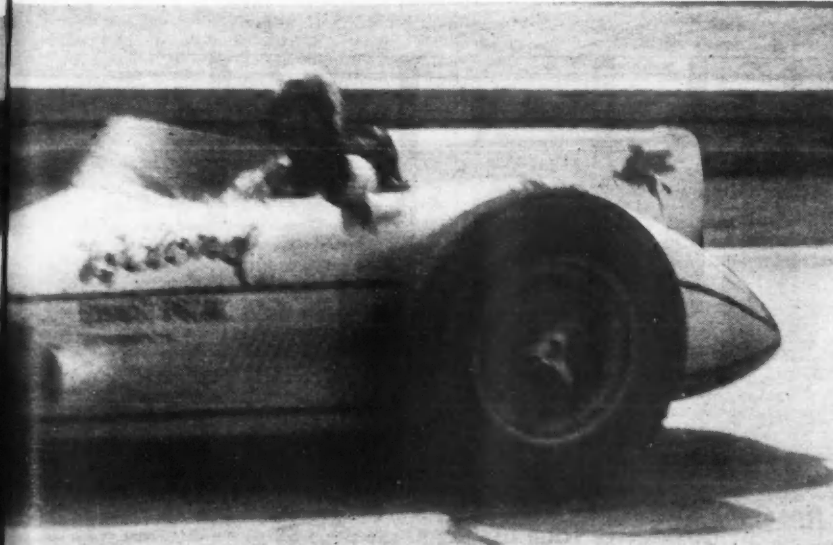
Q. What racing have you enjoyed the most? Was it at Indianapolis? In the midgets? On dirt tracks? In stock cars?

A. Well, to answer the question as truthfully as I think I can, I enjoyed all types of racing. Now, I started in midgets when I was about 21 or 22 years old and, as I say, midgets are my first love—I was very successful with them and I enjoyed driving them. To describe driving a midget: it's kind of like sitting on a keg of dynamite waiting for it to go off, and again, the midget is the greatest teacher in automobile racing because it's a little tiny car and the smaller the car the quicker it handles and the faster it maneuvers, and you've got to be right on top of it. I enjoyed the big car racing at Indianapolis. I think that every driver's goal is to run in and win Indianapolis, and it's the greatest race course in the world. Winning at Indianapolis is the greatest thrill a driver could have. I also like stock car racing—it's the safest type.

Q. Speaking of your personal success, Sam, we understand that you won the Helms Athletic Award and a few other awards. Would you tell us exactly which ones those are?

A. I won the Buckle Award for the month of May, the KNXT Athlete of the Year Award here in Los Angeles, and the Los Angeles Times award for auto racing. I really enjoyed being chosen the Athlete of the Year by the Helms Athletic Foundation in 1957. The recognition that to me was the most gratifying was being elected by the Helms Athletic Board to their Hall of Fame in April, 1958.

his 22 years of experience for advice to racing's young hopefuls



SAM HANKS in his greatest moment waves to a friend after taking the checkered flag at Indy.

MT Selects Best Buys in Used Cars continued from page 23



'55 Thunderbird

T-BIRD & CORVETTE



'51 Chevrolet Styleline

FOUR-YEAR-OLD CARS



'48 Chevrolet Sp. Dlx.

SEVEN-YEAR-OLD CARS

"Extravagant beyond necessity," was the first thought of most 1955 car buyers eyeballing Ford and Chevrolet entries into the sports car market. Four years later we find public approval has maintained resale value of our little two-seaters at a higher level than most other American cars. There is only a single car (Rambler) you could have bought that would have cost fewer dollars to own for the past four years.

Our chart shows that T-Birds held their value during the first year far better than most anything on the market, while Corvettes depreciated about the same as Cadillacs. During their second year both cars stuck near the same depreciation percentage while continuing their normal downward course. In 1958, when their cost as 1955 cars was in the neighborhood of a stripped 1958 sedan of the low-priced three, retained value had stabilized and they were among the most desirable pieces of used car merchandise on the dealer's lot.

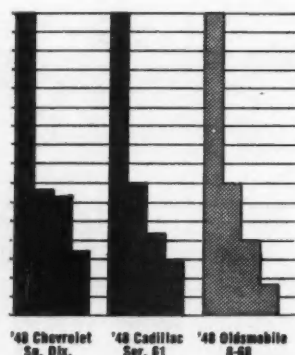
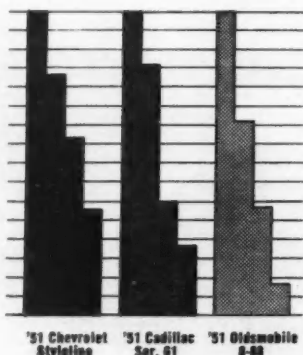
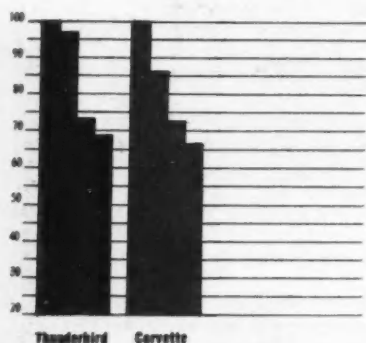
"So you're going to buy a four-year-old car, because it won't depreciate any more." It's not true. We checked the *least* depreciating cars of each price class on the basis of buying a '51 in '55, selling it in '58. Chevrolet did the best job by depreciating only \$385 of the \$730 paid for a four-door sedan. Oldsmobile would have cost \$685 of \$970 invested in a similar package. Cadillac would have slipped \$1045 of the \$1705 invested in a four-year-old sedan. The topper is that if you had bought a 1955 Thunderbird, Corvette, or any small station wagon in 1955, you could have driven this nearly-new car four years and not be out of pocket more than \$100 over what it cost to drive the old Caddy. The moral: For an old car, buy one of the low-priced three. However, if you buy something else in good condition \$200-\$300 under the market price, you can enjoy a larger car, poorer gas mileage, and more expensive repairs—and still lose only the same percentage as if you owned a small car.

Buying an old crock for a second car often costs less than might be suspected. Using our best-value Chevrolet, Oldsmobile and Cadillac we assumed the purchase of a 1948 sedan in 1955, drove it until 1958, then sold it for market value. The Chevrolet would have cost \$250, the Oldsmobile \$270 and Cadillac \$435. This is cheap transportation for 36 full months of use, presuming no major repairs clobbered your bankroll. By the time any car is 10 years old, it's waging a losing race with the junkyard. A '48 Olds sells used for about \$100; as junk it's worth from \$35 to \$45.

How close can you get? Buy the old car and buy good mechanical condition, pay no more than average market price, make no repairs (only tires or batteries), drive it until it falls apart, then call the junkyard to tow it away. Though of doubtful value for long-distance or high-speed trips, older cars do the job better than people, when you need cheap transportation around the house.

—William Carroll

THREE-YEAR DEPRECIATION (1955-1958)



For additional tips:

HINTS ON HOW TO BUY A USED CAR—see page 65

GUARANTEE YOUR USED CAR—see page 68

THUNDER on the Road

continued from page 25

the speeding automobile "wedged out" the two stationary cars parked slightly less than a car's width apart.

Two weeks were spent getting all of the car action scenes on film, with Loftin the only "actor" working. Mitchum, Gene Barry, Jacques Aubuchon, Keely Smith, Sandra Knight and Bob's 16-year-old son, Jim, showed up on the location sites daily, nevertheless. From a safe distance they joined local citizens as spectators at the spine-tingling show.

Loftin knows that even the best-planned stunts can go wrong at times. For a deluxe turn-around at 70 miles per hour, the transporter, being pursued by federal agents, is supposed to execute a complete turn-around on a graveled shoulder of the road, take off again in the direction he'd just come from, thereby eluding the "revenooers" who are instructed not to take unnecessary chances. The safety precautions insisted on by Mitchum and Loftin paid off when, on the first filming of the scene, everything went according to plan until the wheels hit a hidden obstruction in the gravel just as the car was completing its spin. The car suddenly described an arc, turned over completely and came to rest on its wheels. The sides of the car, reinforced with the roll bar installation, had kept Loftin from possible serious injury. With the dust still settling, he emerged from the car unhurt, thanks to his credo of "leaving nothing to chance."

AS A REGULAR precautionary measure Loftin will not tackle a job without thoroughly inspecting the vehicles he is to drive. In addition he requires at least 24 hours' notice—this gives him time to lie in bed the night before, mentally solving the problems he must combat to minimize his job's hazards.

Drawn from his many planned crashes, Loftin passes on this safety rule: "The average car can withstand more impact from the bottom, the rear or the right side. Most dangerous is the driver's position on the left side. When impact is unavoidable, try to set your body's weight in the car's center where there's less impact than in any other position."

In laying out the plans for the "break-through" in *Thunder Road*, Loftin planned on the unexpected. Everything went according to the script—almost. The hood, previously wired down as an added precaution (the regular catch won't hold it down in that type of smashup), was buckled by the impact to the extent that Loftin couldn't follow his original plan of heading for a marker set up in the middle of the highway. His front view blocked, he switched to his alternate plan—following a series of markers set up alongside the road for just such an emergency.

The stunts weren't all performed without injury, however. When Loftin completed his flight through the air into a bank of transformers, Mitchum was so eager to see if he'd come out of it whole, the actor rushed to him over the rough terrain, stepped in a hole—and broke a small bone in his ankle! /MT



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promptly filled. Satisfaction or money back. Send \$6.95 for driver's side only or \$13.90 for both sides. Check, money order or cash. Give make, year and model of your car. Send order to The Wind Stopper Co., 2680 Geary Blvd., Dept. MT-7, San Francisco 2, California.

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(2) Adjustable Rear End Lowering Kit

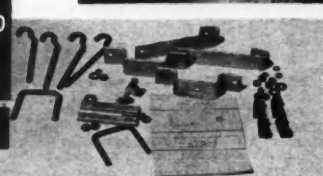
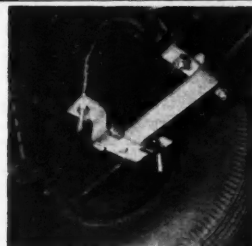
This dual purpose Lowering Kit-Stabilizer takes the soft, mushy ride out of coil suspension, assuring you of safe, controlled cornering. In addition, this Staba-Lower serves as an adjustable lowering kit that gives your car that low, sleek, custom-styled appearance.

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HINTS ON HOW TO BUY A USED CAR

This important transaction involves your pride, your pocketbook, and your peace of mind. Here are some tips on protecting all three.

by Alex Walordy

BEFORE YOU GO SHOPPING for a used car, spend a few minutes with a pencil and paper to jot down how you will use the car, and how much of your budget you can devote to your car—either on a cash or a time basis. This small “think” session will save time and costly mistakes. Some basic questions to ask yourself are: Do you want prestige? Must you keep up with the Joneses? Do you need just a utility car?

IN A PRESTIGE CAR, stay with a brand name and a car with not too many accessories, for best resale value. If you are buying nearly new, remember that a car depreciates 25-30 per cent in its first year, sometimes more. From then it graduates down to 20-25 per cent the second year, 15-20 the third, etc. You must be careful that you don't owe more on the car than it is worth—this is possible with too low a down payment and monthly payments that stretch out too long.

FOR ECONOMY AND PRESTIGE, a small imported car can be a boon. You can be different and distinguished, on a budget. Gas savings, though, can be used up by the extra cost of repairs and the difficulty in finding competent repair facilities; don't let an uninformed mechanic experiment on your time. Road handling, ease of driving, and ease of parking are the small cars' strongest points, especially on short hauls and city driving. They also bring an excellent resale price, both in suburbia and in town.

FOR UTILITY, buy one of the Low-Priced Three, either in a V8 or six (see page 36), but stick to the lowest price model. This makes for a small initial investment. You can also consider the Rambler series and Studebaker, but your trade-in value may be lessened unless you “stay in the family.” In this class you don't necessarily need power accessories. On the

more expensive models, power steering and brakes may be needed to enhance resale value. Back-up lights, Kleenex dispensers, mirrors, fancy bumper guards and other trivia do not add to resale value, in proportion to their initial cost or otherwise.

WHERE TO BUY Don't fall for the old clichés about buying from a private party. A private seller has no overhead and no



responsibility. While he may be honest, he also in all sincerity may stick you through his ignorance. While the dealer is not of necessity a paragon of virtue, he does have a “front” and a place of business to maintain. You can't get something for nothing. A private party usually charges as much as a dealer's taking (not asking) price. A used car dealer will often charge less, and give somewhat less service than a new car dealer. Some dealers sell repossessions, cars which were taken back by a finance company for non-payment. Some bargains here, but proceed with caution—the man who could not keep up the car payments in all likelihood did not keep up the maintenance.

Don't buy street corner bargains. Don't buy from people who do not have sufficient identification, who have just bought the car, and are reselling it, un-

less they can establish and you can confirm by telephone or in person that they bought it from a reliable in-town dealer. Even then a quick sale is always suspicious. They always have a perfect excuse: car too big, too small, wrong color, wife does not like it, going on strike, family emergency, etc. Check the registration date from the certificate.

A “bargain” could be a stolen car. It could also be mortgaged. If a man owns a car which is financed by a bank or a loan company, he is committing a criminal offense if he sells it before paying off the mortgage. You as the buyer would have to pay the full amount he owes on the car or give up the car. It is like buying or receiving stolen property. If the seller is selling to clear his mortgage, accompany him to the bank or loan company and pay them. Ask the bank officer if the car is now completely clear.

Buying from minors or selling to minors can be poison. They can be one day under 21, and swear that they are of age, then cause you no end of trouble. They are fully protected under the law. The only acceptable proof of age is a driver's license or birth certificate. Copy down the number of that driver's license on the bill of sale; make sure that the signature matches that of the registration. As it is a misdemeanor in most states to falsify any statement on an application, including age, a minor will think twice about facing a criminal charge. Draft cards and birth certificates are sometimes falsified and though it does not seem logical that “that innocent-looking, peach-fuzzed kid could be dishonest,” don't stretch your luck.

The private seller's “guarantee” is more worthless than most guarantees. Don't be bashful about asking direct questions like, “How much money do you owe on this car?” This is a better question than, “Do you owe money on this car?”, because it does not give the seller a chance to think in terms of an untruthful answer.

continued

Hints on How to Buy a Used Car

continued from preceding page

Your bank manager or your attorney knows how to check a car for mortgages or liens. Your local precinct or auto squad will usually be glad, or at least willing, to check their stolen car list.

GUARANTEES AND WARRANTIES Your best guarantee is to shop carefully and to road test your car before you hand over any money. Your next best guarantee is to purchase the car at a reasonable price and to have a little money set aside for repairs. This is a must, even with a brand-new car. A car is a mechanical contrivance, and the best of them can break down. A seller, be it a private party, a used or a new car dealer, or the elves in the woods, can only vouch for the fact that the car is working well at the time of the sale. The future can be predicted only in terms of good future performance. The dealer will then issue what amounts to an insurance policy or guarantee against breakdowns. This guarantee is only as good as the dealer, and he does not intend to lose money on it. A reputable dealer will charge more for the car, and give you better service. Many dealers will sell you on price alone, and then take it out come guarantee time. You can just as well act as your own guarantor by buying right and setting money aside for repairs.

Through loose common usage the terms, "warranty" and "guarantee" are often used interchangeably. In law, however, there is a distinction:

A **warranty** is a statement by a seller that a certain fact is true. For example, a dealer gives you his warranty that this is a '58 model. If you find that it is not, you can sue the dealer.

A **guarantee** is a promise to pay or answer for the defaults of another person. In other words, on a new car the factory backs up the dealer, to make good on the car sold.

In buying a used car read your warranty or guarantee carefully and know what it's worth. To protect himself against abuses—not all customers are saints—the dealer words the guarantee very carefully. The longer the guarantee period, usually the more gimmick clauses there are. Tires, battery, glass and most accessories are usually not covered. Repairs must usually be carried out at the dealer's place of business and the car brought there at your expense. This does you a great deal of good when you are stuck at the other end of the state.

An unconditional guarantee is a rare bird indeed. The parts guarantee is usually accompanied by an overcharge on labor. The 50-50 parts and labor guarantee—where the customer pays half and the dealer pays half—often does not

result in any form of saving for the customer. Inspections and guarantees by outside services are of dubious value to the customer unless they are performed by a reputable firm (see page 68).

HIGHBALLS Don't fall for two favorite selling techniques, the "highball" and



its counterpart, the "lowball." The highball means that the salesman spots you as a shopper who is not ready to buy. He then proceeds to quote an unusually high trade-in allowance on your car—just to get you off the market. When you return after a short while, having decided on the "good deal" you find it is no longer available. The lowball is an exceptionally low quoted price on a new car. A lowball is usually used when no trade-in is involved. The actual selling price is sure to go up during the dickering session that follows.

Don't fall for another trick where a deposit at a very desirable price is taken, then when you are ready to take delivery, the excuse is made that, "The salesman made a mistake." This is used by the dishonest dealer to "raise" the customer. You have little or no legal recourse. Take back your deposit and go.

DOLLARS AND SENSE When the appearance of a car is clean, it does not necessarily follow that the mechanical running gear is also good. A dealer whose repair facilities are busy will often show a clean car with a mechanical defect which he will offer to fix. There is nothing wrong with this, but don't give him any money until he does. One important exception: never buy a car with a bearing knock, unless an engine swap is indicated as part of the bargain.

If a series of mechanical or appearance details must be fixed, give the dealer a list and ask him if he will fix them. In making up your list, keep in mind that time and labor cost money, and there is such a thing as asking for the impossible.

Price and profit are the factors which determine the amount of work that a dealer can put into a car, either before the delivery or during the guarantee. Never accept the car until the agreed repairs are completed.

While you are examining the car, you may hear what seems to you to be an engine knock. If you feel that the repair cost will be considerably more than a few dollars, offer to pay for it at the rate quoted. If he accepts, well and good. If he doesn't, you were right in the first place.

In talking price, don't discuss the final figures until you have been quoted the price of the car you really want. If the salesman pegs you from the very start as a bargainer, he will quote higher prices to give himself room to come down. When you park your trade out of sight, with the intent to spring it at the last minute of the bargaining session, don't wave your car keys around.

In trading a car, remember that there is only one thing that matters: "How much difference am I paying?" The inflated trade-in value of your car is just so much window dressing. The only true way to determine that value is to shop for a similar car without a trade. The value of your trade can be determined by finding out what that car brings at dealers' lots. There will always be an element of profit involved for the dealer. If you live a considerable distance from the dealership, it will be time-consuming to collect on your guarantee. It might then pay to buy the car on an as-is basis and get something knocked off the price.

INSPECT THE CAR FIRST Always try to get the car up on a lift before signing up for a car. On a lift, check for oil leaks at the engine, transmission and rear axle. If the underside of the car is clean and covered with an oil film, a sizable amount of oil is leaking out. Check the chassis for straightening and welding marks. If you find any, avoid the car. At the same time inspect the exhaust system for rusted-out holes in the muffler and the exhaust pipes. Check for loose universals. Examine the inside walls of the tires for cracks and cuts.

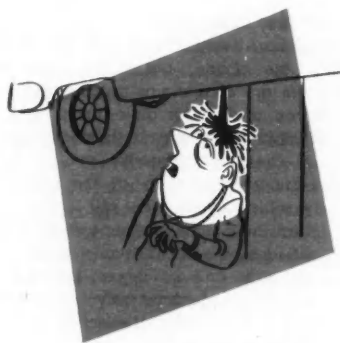
Examine the car you are considering to buy for signs of taxi or U-Drive-It usage. Excessive wear and abuse, badly-worn upholstery, and roof marks from taxi signs are indications of taxi use. (This will usually be a cheap four-door model of an economy car.) Holes in the dashboard come from a radio phone. A paint job which shows the shadows of a door insignia, and off colors such as bright yellow, or red and black may mean a taxi or a fleet car. These colors are often seen at scratches under the hood, or under rubber trim and weather seals. When a taxi or a police car is discarded it has outlived its usefulness.

When you see the car you like, walk

around it, and see if your first impression holds up. Chrome should be fairly clean, there should be no dents of any consequence, no broken glass, no scratches on the windshield, and it should have decent paint. Sight along the sides of the car. This will show up waves in the fender panels, from poor straightening work. Cars that have been involved in bad collisions are risky; see by checking the frame. Almost any car has had a fender scrape, and it does not affect the running in any way. Marks and scrapes do detract from value and should be compensated substantially by the purchase price. The inside of the car should be clean and unfrayed. Bad odors inside a car such as those of dampness and burn, are difficult to eliminate. The doors, trunk and hood should open and close easily. Doors and trunk should lock. Windows must move up and down freely.

Time for a few deep bend exercises. Look at the front tires. Uneven wear indicates past or present front end troubles. While you are looking down note if there are any oil or water leaks on the ground. Wheels that are wet on the inside denote leaky grease or oil seals, or leaky wheel cylinders (brakes). Look at the rear tires. Uneven wear means they were switched from the front to the rear, either at the time the front end was fixed, or to conceal the fact that it wasn't.

NEXT, DRIVE IT If you still like the car after the appearance checks out, start the engine and let it warm up. Never race a cold engine. An engine must start quickly and easily. If the battery is low, as it will get from standing inactive for a while, a



booster battery or a charge will help, but after the battery is charged, there is no excuse for the engine not to start quickly. In checking for engine noises, never race the engine other than in extra short bursts. Most engine noises show up during engine acceleration. Knocking and hammering noises denote trouble. Valve lifters make a clicking noise at idle, and this noise speeds up with the engine, but does not get louder on quick acceleration. If the dealer offers to adjust them, let him.

If the car has hydraulic lifters, the clicking can be costly. Bearings and wristpins show up as a rumble.

The only way to check out a car is to drive it. Do not leave a deposit on a car until you have driven it. A test drive will show up body squeaks and rattles, defective brakes or drive train components, and loose steering.

CHECK THE BRAKES Your life depends on the brakes. Before you start out, feel the brake pedal and check for excess play. As you start rolling along in a strange car, **always** test your brakes within the first few feet of operation. Brakes must not pull the car to one side or grab, when applied. You should be able to stop without correcting the steering. Grabbing indicates oil on the linings or defective linings. When light, steady pressure is applied to the brake pedal it should go down until the brakes are fully applied. After that the pedal should remain firm and immobile. If it slowly goes all the way down there is a leak in the brake system, usually in the master cylinder. Any brake defect is serious but cost-wise, brakes are inexpensive to fix.

STEERING A car must have perfect steering. Before starting out, check the play in the steering wheel. Anything over an inch is 'way too much. When you drive through a straight stretch, the car should not pull consistently to one side or the other. A pull is due to steering or frame misalignment. At the higher speeds the car should not have a tendency to wander all over the road. This is usually due to a loose front end or incorrect adjustment.

Have the front of the car jacked up so that the front wheels clear the ground. Shake the wheels from side to side, both in the horizontal plane, to check for loose steering linkage, and in the vertical plane to check for loose suspension components. Start up and stop sharply a few times. If each start and stop is accompanied by a metallic clank the A-frame pivots are loose.

On power steering units, check for operation and inspect for outside leaks. A shimmy, during which one or both of the front wheels go into a violent dance making the steering wheel hard to hold at some speeds, shows a possibly very loose front end. Another likely culprit is a badly out-of-balance wheel. Changing the tire will usually do the trick. Driving an auto with defective steering is against the law in many states; in case of an accident you would be in serious trouble for driving such a car.

CHECKING THE AUTOMATIC Automatic transmissions are increasing in numbers. An automatic must shift smoothly through the speeds; there should be no undue delays in shifting. If you start off with your foot all the way down to the floor,

the shifts should be slow. When you release the gas pedal, the transmission should shift up.

If you are in top gear, and press all the way down on the accelerator, the transmission should immediately downshift—if the car is below 60 mph or so. An exception to this rule would be a transmission like the Chevy Turboglide, in which there is no actual shifting and where the vanes of the stator move to provide the greater torque ratio. Nonetheless, you should feel the upsurge in acceleration due to the change in torque ratio.

Automatic transmissions often suffer from leaks. At 75¢ for a quart of type A fluid, these leaks can become very expensive, especially if the transmission becomes damaged due to lack of oil. All automatic transmission repairs are expensive. Probably the safest bet is to figure that \$100-150 for an exchange unit should be allotted to the repairs. Be careful to inspect the underside for leaks, especially right after your return from a test drive. Park the car on a dry spot of ground and see if fresh oil drips out. (The same test also applies to the engine.) While a repair on a rear seal leak can be effected rather easily with the transmission in the car, front seals require that the transmission be taken out of the car. The surface on which the seal rides is often scored and also needs replacing. As this surface is usually part of an expensive assembly, like the front oil pump or a torus cover, the price of the parts might justify the extra expense of a guaranteed rebuilt unit. Shift timing can sometimes be adjusted from outside by shortening or lengthening the link from the accelerator to the transmission.

OTHER TEST TIPS While you are test driving a car check the windshield wipers, the operation of the radio, and the length of time it takes for the heater to begin putting out. Just because you are buying the car in the summer is no reason to overlook the heater and defroster.

After the engine has warmed up, check for excessive smoking. It takes a thoroughly warm engine to get the oil to its normal operating viscosity. Black smoke, right after a cold engine start, may mean that too much gas was pumped into the manifold by the driver in pumping the throttle. Blue-gray smoke usually means oil burning. While driving, let your foot off the accelerator and coast, then press down on the accelerator. A thick burst of blue-gray smoke means oil is being pumped into the cylinders. High manifold vacuum at deceleration is merely helping to show up an existing condition.

REMEMBER: Buying a used car represents an important investment. It's wise to learn as much as you can about the car and the seller. Having confidence in both will help ensure a happy purchase. **MT**

Worried about buying that used car?
Want someone else to check it out?
Maybe your answer is one of the new
warranty companies that will . . .

Guarantee YOUR USED CAR

by Pieter J. Schiller

THERE'S BEEN AN INNOVATION in the automobile field the past few years that's grown to considerable importance: the one-year warranties on used cars. Although they were pioneered more than three years ago, their increasing popularity and importance have not been felt until the last year or so. If you are in the market for a used car, you might do well to check into them.

There are several needs which warranty company executives maintain these plans fill. The first is a need for a kind of hospitalization for cars—protection against future costly repairs. Second is the buyer's mistrust of the used-car salesman and the resulting desire of many to have the cars examined by an independent expert. The third is an attempt to eliminate putting large sums aside for possible extensive repairs. Whether or not the warranties meet these needs for you, only you can decide.

HOW DID THESE WARRANTIES develop? The first ideas for what has mushroomed into a multi-million-dollar industry were born in the mind of C. W. Millburn, a northern New Jersey automobile dealer. With capital and administrative assistance from Harry Campbell, also of New Jersey, the pioneer firm in this field—National Bonded Cars, Inc. of Springfield, N.J.—was formed in 1954. As proof of their honorable intentions, N.B.C. secured insurance company bonds as backing for the warranties.

The tremendous public acceptance of used-car warranties is shown by current statistics. N.B.C.—the field's present leader—alone claims about 250,000 of their cars on the road, and over 4000 dealers selling warranted cars. They are served by over 80 district and branch offices coast-to-coast.

Registered-Tested-Cars, Inc. of East Orange, N.J., the nation's number two issuer of these warranties, has a similar setup. The size and possibilities of this program are further shown by the entry, in the fall of 1957, of the huge auto finance company, Universal C.I.T. of New York.

At this point, here is a word of warning. As in any new field there are always

those seeking a fast profit at the public's expense. While there is little question as to the honesty of the firms mentioned above, and some of the others, too, be sure to read and understand every word on the warranty. If the issuing company is honorable, they'll have nothing to hide. Several small fly-by-nighters have raised havoc lately along the East Coast. A word to the wise should be sufficient.

THE FIRST QUESTION you may ask is, "Where can I find a car carrying one of these warranties?" If you live in a small town or rural area, check all your nearby dealers; the phone book may list the nearest branch office. The same holds true



for those living in or near larger cities. In any case you can always get information by writing any of the home offices.

"What cars are covered?" A dealer may submit any 1954 or newer American car for company inspection. A few outfits will also cover popular foreign cars of recent vintage provided they're neither designed nor purchased for competition.

"How much does all this cost?" The average yearly charge is \$40 to \$50. This may be included in the car's cost or added on as an extra. Better check on this one yourself, as dealers vary.

"What do the warranties cover?" All of the policies cover about the same items. The following list is taken verbatim from the N.B.C. warranty:

Motor: Pistons, pins and rings, valves,

valve lifters, valve stems, valve guides, valve springs, oil pump, and timing gears. Camshaft, crankshaft, bearings and gaskets.

Standard Transmission: Gears, seals, and bearings within the housing.

Automatic Transmission: Gears, seals, and bearings within the housing, and electrical mechanism in transmission.

Rear Axle: Gears, bearings, oil seals and gaskets within housing.

Clutch: Disc, pressure plate, release bearings.

Steering: Front axle assembly (except alignment and adjustments).

Brakes: Master brake cylinder, wheel cylinders.

"**WHAT DO I DO** if my warranted car breaks down?" Wherever you are, take the car to the nearest garage (policies don't cover towing), and get an estimate of the necessary repairs and cost. One of the big companies requires the car to be repaired by an authorized new-car dealer. Next, telephone the nearest office and explain the situation, giving them an estimate of the repair costs. More than likely, they'll O.K. the repairs over the phone; but if the necessary repairs are of a major nature, they may tell you to wait for an adjuster to come and look at the car. If they feel the repairs are not necessary to the future satisfactory operation of the car, they may refuse to pay the bill.

"Can the policies be renewed?" To my knowledge, the R.T.C. policy is the only nation-wide one which can presently be renewed. This is done only when the car passes another rigid inspection.

"How does a dealer get in on this plan?" If he hasn't been invaded by salesmen from one or more of the issuing companies, he may file an application at any nearby office. There is no cost involved to the dealer to join. He is charged the \$40 to \$50 per policy, which he usually passes on to you. Once he's in the system, an inspector calls regularly to check all eligible cars. Satisfactory ones receive company warranties and those that fall down somewhere must be repaired and submitted again. Some of these warranty companies franchise any dealer; others

work only through factory-authorized new-car dealers.

"WHAT'S GOOD about these warranties?"

(1) They do remove some of the risk in buying a used car. (2) Service is available anywhere in the U.S. (3) The warranties are good for a full year and cover the entire bill, parts and labor, 100 per cent.

"What are their shortcomings?" (1) They are **not** all-inclusive—such things as cooling system, electrical system, and tires are not covered. (2) Some dealers maintain that the added expense of fixing up a used car to pass inspection and the cost of the warranty make prices too high for competition. (3) The warranty companies reserve the right to make the final decision on the necessity of repairs.

IF YOU HAVE RESERVATIONS about the used car you're thinking of buying—or about the dealer's promise that "it's in tip-top mechanical condition"—then you may want to consider a car carrying a national warranty. Remember, however, that a warranty does not eliminate the need for you to know the car, the seller, and above all the specific terms of the warranty itself. **/MT**

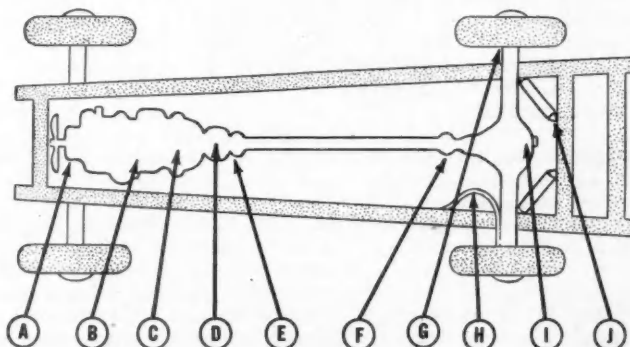


by Rodger Darling

LEAK-LOCATOR—Summer-thin lube often leaks through winter-shrunk gaskets. (See sketch at right.) Look for: **A**—Leaks here suggest need for new timing-chain seal. **B**—Oil-pan gasket leaks. Tighten or replace. **C**—Main bearing engine oil seal (heavier lube indicates leaking transmission seal). **D**—Transmission cover gasket or speedometer seal. **E**—Transmission rear bearing seal, also indicated by oil splattered across under-body. (If car has torque tube, oil may run back, over-fill rear end and be forced into brakes.) **F**—Differential oil seal. **G**—When back of wheel is covered with oil, replace axle oil seal to prevent brake grab and slip. Check "E." **H**—DANGER! Brake leakage. **I**—Tighten or replace differential gasket. Tighten plug. **J**—Leaky shocks usually need replacement.

AUTOMOBILE ICE-BOX—The night before driving to a picnic, fill a few milk or cream cartons, or beverage cans, three-fourths full of water and place in your refrigerator freezer. Next morning, when frozen solid, seal the cans with wax paper and tight elastic bands, or re-seal the wax of the carton pouring spouts with a hot knife blade. Stand these convenient leak-resistant ice containers in a newspaper-lined carton, pack your sandwiches and drinks in beside them, and you'll find your picnic lunch will keep cool and fresh for hours.

KNOW YOUR "OIL RATE?"—So you hit the high-speed highway and high-tail toward your vacation hundreds of miles away. . . . Better re-check the oil after the first hour of superhighway speeding, for that FULL may sink to ADD OIL much sooner than you expect, because: (1) oil already used in city driving will lessen as dilution in it is "cooked out" by hot fast driving; (2) many cars, easy on oil at ordinary speeds, burn six times as much at sustained 60 mph; (3) your car may have developed oil-eating traits, not noticed during everyday short hops.



YOU'LL WONDER WHERE THE YELLOW WENT—You can clean the plastic lenses of dashboard dials and gauges—and even remove minor scratches that make clear plastic appear cloudy—by rubbing with a clean dry cloth and **toothpaste**.

WASTING GAS?—If you think your car is wasting gas, the installation of new or newly cleaned spark plugs provides a good chance to check. After driving 15 minutes remove the plugs and examine for sooty black deposit, an indication of too-rich mixture and faulty combustion.

HOME-MADE AIR CONDITIONER—If mid-summer driving heat becomes unbearable, try this: Close car windows almost completely, place a pail of ice cubes or dry ice on the floor directly under the heat or air vent (intake open). Intruding air over the ice will keep you cool.

SERVICE TIPS FROM MANUFACTURERS . . .

ON AIR SUSPENSION CHEVYS, the factory suggests that you use the shut-off valve, which prevents air pressure from leaving the system when the engine is not running. They also suggest its use when towing. Other tips include: 1) Check fluid level of alcohol bottle in cold climates to avoid icing the system, 2) Drain accumulator tank every 5000 miles, and 3) Clean air cleaner with gasoline every 1000 miles.

WHEN USING A TIMING LIGHT to set ignition timing, accelerate the engine slowly to see if timing advances

smoothly. Sometimes excessive wear in the bushing or distributor drive train will cause fluttering or "fanning" of the timing marks at certain rpms. If the flutter exceeds three degrees, the engine is not firing at the proper time.

IF YOU FIND YOURSELF GETTING DROWSY while driving, you may be getting a bit of carbon monoxide poisoning. The National Auto Club advises you to open the windows immediately because a slight concentration can impair your mental and physical capacities; a stronger concentration can lead to death.

Questions from readers

Q. SLOWER BUT FASTER? How is it possible for one car to turn a quarter-mile in 19.7 seconds and 78 mph, while another car turns it in 18.5 seconds but only hits a top speed of 75 mph. It just doesn't make sense to me that a car can do the quarter-mile in less time and still be three miles an hour slower. Glen Benoist, St. Louis, Mo.

A. This is a question brought up whenever two or more cars drag the quarter-mile. The top speed is of no importance except as an indication of how fast the car accelerates. If car "A" reaches 78 mph in a quarter-mile but takes 18.7 seconds to do it, its average speed per foot was less than the car requiring only 18.5 seconds. Car "B" therefore reached the end of the quarter-mile two-tenths of a second faster than car "A." It was probably much faster in the first 500 to 1000 feet of the course and slower during the remaining distance. Its average speed per foot over the whole course was greater, however, which put it over the finish line in less time than car "A" without the necessity of attaining as much top speed. Now who's confused?

Q. NOT IMPOSSIBLE. Can I install a '57 Chevy V8 in my Austin-Healey 100-Six chassis? C. Worth, Newport Beach, N.Y. A. It's a lot of work but has been done. We know of a similar installation with a Latham blower on it—0-60 in 5.8.

Q. WON'T MAKE IT. I have been told that a 1950 Kaiser Vagabond with three doors that open and one rear door on the left side that is sealed is becoming a classic. I would like to know how much truth there is to this story. Ray Richards, Hammond, Mont.

A. In our opinion, a 1950 Kaiser will never be considered a classic. The reason is that true classics are luxury or prestige cars and are examples of the finest type of workmanship available during the period of manufacture. The Kaiser you refer to was designed as an expensive utility model. It is a fine example of a special interest car, but when compared to other models of the same year it is neither luxurious nor powerful, and it is certainly far from a prestige or luxury model. From a classic standpoint the 1950 Cadillac, Lincoln or Chrysler far surpasses the Kaiser, yet we doubt that any of these cars will ever attain the status of a Duesenberg or Packard 12.

Q. COMPLICATED. I own a '47 Ford and want to install a '31 Olds engine with a 25-tooth Lincoln-geared Ford floor-shift

box. How can I couple this transmission to the engine? David Crain, Ft. Worth, Tex. A. An adapter plate for this setup is manufactured by the McBarr Machine Shop, Inc., 65 N. Miami St., Peru, Ind.

Q. OBSOLETE TIRES. I have been unable to locate 7.00 x 16 whitewall tires. Have you any information as to where these may be obtainable? David Proctor, El Paso, Tex.

A. It is becoming increasingly difficult to find any new tires for certain classics, much less whitewalls. Over the years wheel manufacturers have consistently reduced wheel size, which, of course, necessitated hundreds of tire size changes. Frequently an enthusiast must purchase a blackwall tire and either paint it white or have a white strip vulcanized to the sidewalls.

Most manufacturers no longer make tire sizes which were in use in the classic era. Strangely enough, there are many commercial vehicles which use tires that will fit on classic wheels, but they are generally six-, eight- or 10-ply and cause a classic to ride hard.

A few manufacturers, recognizing the need for these obsolete sizes, have gone into production in limited numbers and these are available to enthusiasts. Because production runs are small, the prices are high, yet they are often the only solution to the problem. The Firestone Co. is to be commended for its part in making obsolete tires available to enthusiasts. The Gehrig Tire Co. in Indiana also has a fine supply.

Q. SOME LIKE IT COLD. My '50 Cadillac is almost impossible to start when the engine temperature is 140° or over. The starter motor acts like it has a short or is just about worn out. I installed a new battery and starter motor which spins the engine cold but won't do more than revolve the engine in slow jerks and spurts when it is warm. My dealer can't find the trouble. What is it? Terry Anderson, Minneapolis, Minn.

A. We suspect the distributor cap. As the engine warms up, the cap expands which opens small cracks inside the shell. The high-voltage ignition then jumps from wire contact to wire contact within the cap. This throws the whole engine out of time and the starter motor is trying to overcome the downward thrust of two or more "out of time" cylinder explosions.

Here is a good tip: When you have an engine tune-up always have the distributor cap checked. This often-forgotten item is responsible for an amazing amount of poor performance and hard starting. Have it machine-tested. A visual check is usually worthless.

Q. GLASS BREAKAGE. For the third time I have sustained glass breakage by shutting a car door. The sides of the glass are securely supported in new felt and metal

channels. In no case was the door slammed hard. Have you any suggestions to cure this difficulty? Robert Heyes, Wichita, Kan.

A. The metal channel which raises and lowers the glass may be at fault. It may be loose so that a sudden blow permits it to strike a part of the door. On the other hand, the lifting mechanism channel may be bent or squeezed too tightly at the point where the channel and glass are mated.

You do not state what type of break has occurred nor where the glass breaks. Very often a new sheet of glass is made without benefit of an accurate pattern. If this is the case, the glass may be but one-eighth inch too large, which causes undue pressure resulting in breakage.

Q. SMALL BUT TOUGH. With unit-body construction, how does the Volkswagen compare with the average American car in its vulnerability to collision damage? Darrell R. Dean, Blairsville, Pa.

A. From the standpoint of resistance to impact, the Volkswagen will rate right up among the top automobiles. Its unit construction, along with unusually heavy-gauge metal results in an amazingly strong shell. Its ability to withstand a head-on collision with a much heavier car is doubtful, however, due to the tremendous difference in weight. The heavier car would probably be the safer vehicle in such a mishap, even though the VW could do considerable damage to it.

Q. SAGGING DOORS. Sagging doors are my problem. The door hinges are mounted to wooden posts. The screws and bolts are tight. Is it possible that the entire wood framework has sagged, causing the doors to be difficult to open and shut? Ronald Lawler, Brooklyn, N.Y.

A. It is inconceivable that the wooden framework could shift within its supporting frames. Most door sag is caused by a loose fit between the hinge and the wood. In these cases tightening is in order. You write, however, that the hinge appears to be secure where fastened to the wood, so careful inspection of the hinge assembly itself is necessary. It may be bent, or the hinge may not be fastened securely where it attaches to the door.

In many instances wear in the hinge itself creates a sloppy condition. The holes become enlarged or the pin becomes worn from use. This situation can often be remedied by removing the pins and installing new ones. In other cases it will be necessary to drill the hinge holes one size larger and then install new pins to fit. Precision work is required, but aside from the expense of making oversize pins, the cost is nominal.

It is impossible to answer any letters personally; we will answer the most interesting and most frequently asked questions in this column.

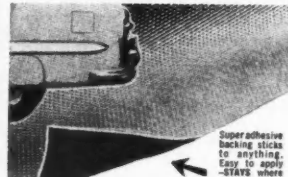
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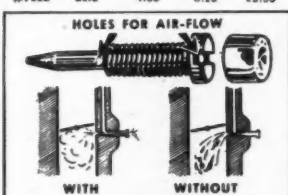
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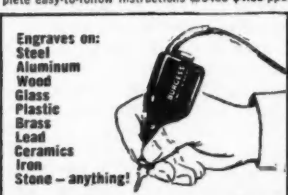
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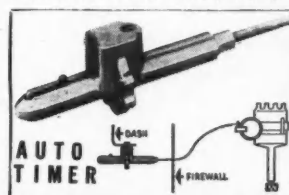
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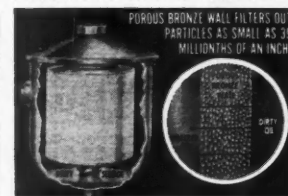
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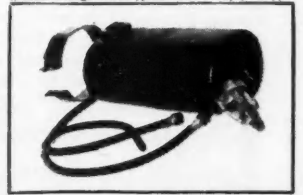


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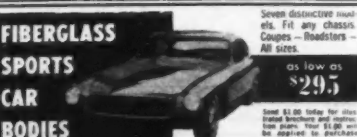


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continued from page 29

intersections, it represented a big problem in speed adjustment to the drivers. They must adhere strictly to speed regulations, must keep their speed at gas saving limits, and yet arrive at their destinations within a close time limit or face disqualification. This requires constant rally-fashion, slide-rule computation of speeds, time and distances. This is the job for the co-drivers who are not just along for the ride—they have work to do and the efficiency with which they do it can spell success or failure for the team.

Intense concentration is required of all economy drivers. There are not only the usual road hazards encountered by the average motorist, but moves must be calculated instantly to avoid breaking a traffic law or

in a different car each day to avoid getting too chummy with the crew. One of the things they check is the entering of restricted speed zones. Unless you want to incur the penalty of running your engine for five minutes while at a standstill or having five minutes deducted from your driving time, you had better be down to the stated speed before and not after you pass the zone sign.

The observers cooperate with the drivers in calling their attention to signs. Between Hondo and Roswell, N.M. the interpretation of a sign by an observer almost got George into trouble. George, busy with other matters, failed to spot a sign posted on a construction zone. The observer saw it, however, and told George he was entering a 15 mile-per-hour zone. What the observer failed to see was

1958 MOBILGAS ECONOMY RUN RESULTS

MAKE	DRIVER	TON MPG	ACTUAL MPG
LOW-PRICE CLASS (In Order of Finish)			
Plymouth Belvedere	P. Venable	48.2284	28.8883
Plymouth Belvedere	M. Davis	48.1881	28.8687
Chevrolet Delray 8	G. Retzlaff	47.8738	28.8441
Ford Fairlane	M. Martin	46.8627	28.7775
Ford Custom 8	I. Lewis	45.2543	28.6870
Chevrolet Cor Air	J. Hartman	34.3235	18.7294
Chevrolet Impala	B. Retzlaff	41.2717	27.1787
LOW-MEDIUM PRICE CLASS			
Oldsmobile 88	L. Poole	50.9051	30.2377
DeSoto Firedoma	M. Buchanan	49.2380	29.3471
Edsel Pacer	D. Allen	48.9844	29.2516
Pontiac Super Chief	L. Poole	48.2385	28.8817
Edsel Pacer	L. Colunga	48.2288	28.8687
Mercury Montclair	F. Hernandez	48.1813	28.8521
Quik Special	J. Hill	48.2880	28.8445
Dodge Custom Royal 300	D. Beattie	46.2404	27.8137
Dodge Custom Royal 300	J. Fischer	43.4382	27.5480
Studebaker President	F. Hovetay	43.3224	26.2600
HIGH-MEDIUM PRICE CLASS			
Chrysler New Yorker	R. Alsbury	50.4828	31.8217
DeSoto Firedoma	D. Fullerton	51.9180	31.8573
Mercury Toronado	R. Stroppe	51.8380	31.8380
Mercury Park Lane	V. Hulse	48.4267	27.4185
Oldsmobile 88	R. Brock	48.2714	27.4040
DeSoto Firedoma	R. Hovetay	47.9407	27.8608
Edsel Glendale	A. Hovetay	47.7114	27.2474
DeSoto Firedoma	R. Hovetay	47.8713	28.8880
HIGH-PRICE CLASS			
Imperial Crown*	M. Alsbury Jr.	52.7188	32.5827
Continental	D. Casey	55.8884	35.8777
Cadillac	R. Griffin	55.8887	35.8888
Quik Roadmaster	G. Bridges	50.3234	32.4604

*Uncontested winner

making an abrupt change in speed. Slow-moving trucks are George's pet peeve. He says, "You see the truck ahead and beyond that a hill and 'no passing zone.' You must make a split-second decision—if you hang back you may be forced to crawl up the hill at 20 miles per hour behind the truck; on the other hand, passing means you must accelerate. You decide to pass, press the gas pedal down very slowly and carefully, get around the truck and with your heart in your mouth just miss entering the 'no passing' zone by inches."

Another factor that kept the drivers from being anything but tranquil is the rule that two observers from the California Institute of Technology ride in each car to see that all traffic laws and Run rules are observed. Mel says, "The students are nice guys, but it's like carrying a couple of traffic policemen with you." The observers are instructed that rules must be obeyed to the letter. They ride

that the sign was a suggested limit sign and there was a second sign placing the legal limit at 40 miles per hour. As a result, George plodded along through nine long miles at 15 miles per hour and then had to sprint to make the stop at Lubbock, Texas within the time limit. This of course was quite destructive to his gas mileage; however, sympathetic officials allowed him an extra 14 minutes driving time the following day to make up the difference.

We asked Mel what the Alsbury plans were for next year and got this answer: "Well, as you know, the tensions and pressures make the Run pretty exhausting. We like to rest up a while before we make any definite future plans. One thing we know for sure is that we will be in again if they hold one because we really look forward to it." . . . and if Mel keeps that feather-foot touch he may add yet another win to his record.

AROUND THE WORLD IN THIRTY DAYS

continued from page 17

per car is allowed and competitors must contribute to the drivers' benevolent fund.

The Milan Automobile Club has organized a precedent-shattering 18-day rally which will cover 3450 miles from Milan to Moscow and return beginning August 3. Non-competitors will be allowed on the trip as an organized tour. Soviet authorities are providing mechanics to help on the Russian part of the route.

Appointment of a receiver spotlights Maserati's deep financial troubles. Activity is severely curtailed but it is hoped that production will continue on the new three-liter Gran Turismo.

The Mille Miglia, set for June 8, will be run this year as a rally-type event. Open to all cars over 650cc engine displacement, it will require some 32 hours of non-stop driving to cover the 977-mile route through northern Italy's rugged Dolomite Mountains. The seven mountain passes, two to be crossed at night, are hill-climbs in themselves.

Bids to American drivers for the second running of the 500 Miglia di Monza on June 29, are currently being issued by Giuseppe Bacciagaluppi, manager of the Autodromo di Monza.

Ten drivers and car owners of the United States Auto Club will be invited to compete against 10 European drivers in this Indianapolis-style classic.

First three American drivers include Jimmy Bryan, 1957 Monza winner, Troy Ruttman and Pat O'Connor. In addition, the Dean Van Lines Special will return to Italy with the driver to be selected.

The Monza management has posted a purse of \$75,000, and with the addition of manufacturers' prizes, the total purse is expected to top \$90,000.

As it was last year, the race will be divided into three equal segments with an hour interval between each series.

RUSSIA

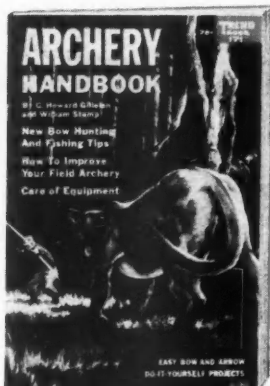
According to a Moscow radio broadcast picked up in London, the Russians "probably will enter the Kharkov, a six-cylinder affair operating in the 2½-liter class" in a major Grand Prix race sometime this year. The commentator said that Russian driver Vassili Nimitin had averaged 170 mph in the car over a six-mile course.

M. Afanassiev, President of Moscow's Automobile section of the Automotor and Cycle Club of Russia, had accepted the invitation of the B.R.D.C. and the *Daily Express* to attend Silverstone as an official observer. Afanassiev is responsible for the development and production of the Kharkov Grand Prix cars.

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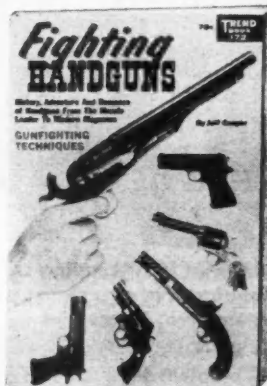


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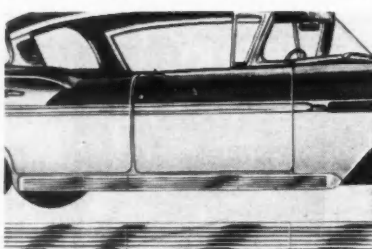
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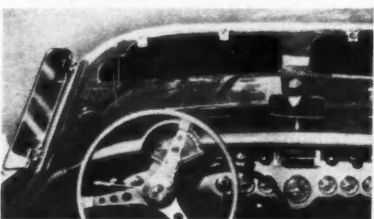
ONE MAN CAN LOAD or unload a boat easily and simply with a new boat loader and carrier called the Portager. An axle assembly with pneumatic tires clamps on the boat transom, making the boat easy to handle to and from the water. To load the boat the bow is placed on rollers and the boat rolled up on the carrier. The rubber-cushioned rollers prevent damage to both boat and car. The portager is made of aluminum alloy and

is adjustable to accommodate all sizes of car-top boats. The generous-size luggage rack may be purchased separately. The car model, complete with luggage rack and boat axle,



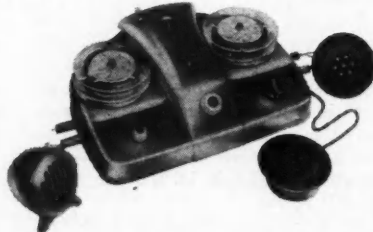
sells for \$108.50 and the complete station wagon model for \$118.50. The unit is manufactured by Mayville Boat Carriers, Inc., P.O. Box 211, Mayville, Mich.

NEW WINDWINGS and sun visors specially designed for Corvettes have recently been made available. They are made of shatter-proof Plexiglas with chromed brass fittings. The windwings are clear and the sun visors are available in transparent green or opaque black. The wings and visors are also available



for some models of Thunderbirds. The windwings sell for \$24.50 per pair, the sun visors for \$27 per pair. The maker is Aetna Mfg. Co., Bensenville, Ill.

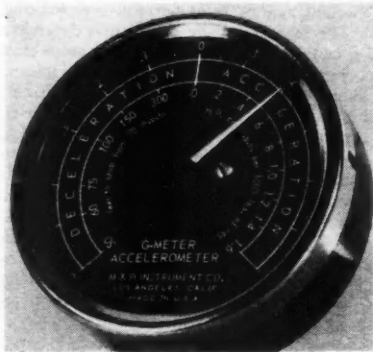
PRECISION MADE in Germany, this portable, battery-operated, transistor tape recorder is capable of performing the same functions as machines costing five times as much. It will record, play back, erase—and even has variable speed controls. It comes complete with microphone, headset, and tape, and is guaranteed against mechanical defects. Priced at \$29.95, it is available from Filnor Products, Inc., 101 W. 31st St., New York.



A QUICK WAY of keeping your car gleaming at all times is available in a handy product called Dustikins. They are four-ply, very soft paper wipers measuring 13¼ by 18 inches. The wipers are impregnated with a car polish plus silicone to clean and polish all metal car surfaces including the chrome.

Twelve wipers come in a handy cellophane bag which can be stowed in the glove compartment and eliminate the need for carrying around soiled cleaning rags. The price is \$1 postpaid and they are obtainable from Miss Celia Feeney, P.O. Box 367, Lakota, N.D.

A CONSTANT WATCH on your car's performance can be maintained with the M & H G-Meter. This device is basically an accelerometer making use of the principle that the greater the acceleration the greater the horsepower for a given car weight at a given



speed. Acceleration is indicated in "g's" and brake effectiveness in "feet required to stop" from various initial speeds. The instrument may be installed on the dash in a matter of seconds. It is available from the M & H Instrument Co., P.O. Box 605, Inglewood, Calif. The price is \$4.95.

HAVE YOU EVER tried to change into a swim suit in a car? This challenge to a contortionist is no longer necessary if you have a Caribbean Beach Booth. The Beach Booth is a combination beach towel and automobile



dressing room made of three metal parts and a huge 70- by 96-inch towel. Designed for quick and easy assembly, the booth snaps into the rain gutter of a car, has a hanger for clothes and gives complete quick-change privacy. The towel washes easily in a washing machine. The Beach Booth is sold by Dugco Sales Co., 3120 Maple Dr., N.E., Atlanta, Ga. The price is \$12.95.

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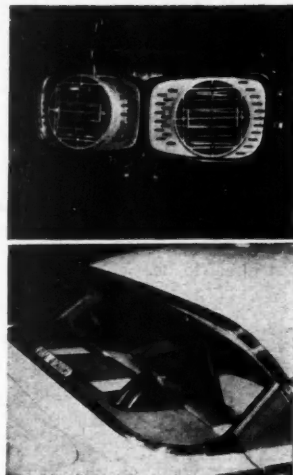
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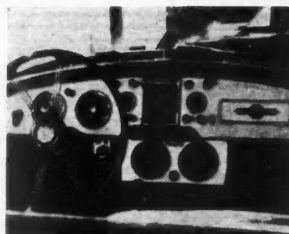
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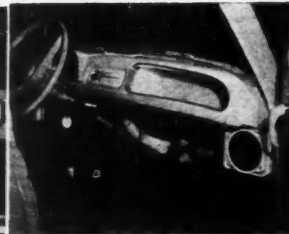
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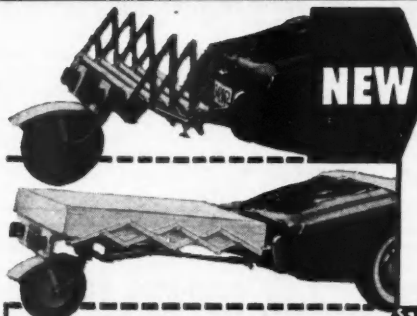


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See page 78 for EDITORIAL FEATURE
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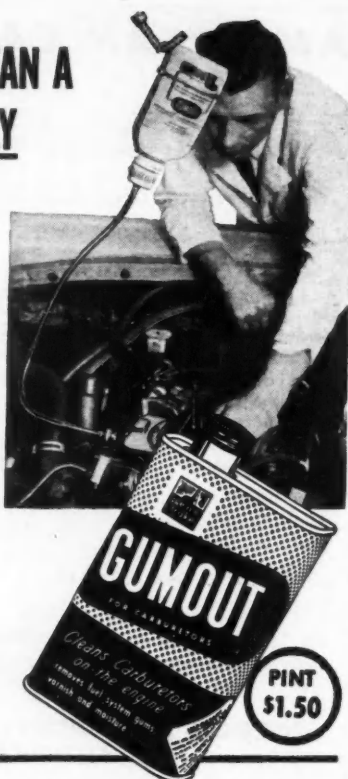
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GOOD NEWS TRAVELS FAST

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Among sports car fans news about an outstanding piece of equipment gets around fast. That's why so many sports cars today are equipped with the Bendix* Electric Fuel Pump. It makes sense, because the Bendix Electric Fuel Pump was designed and built for people who demand perfection. If you are one of those enthusiasts who insist that a

car deliver every last ounce of power and performance that was engineered into it, then you want to know more about the Bendix Electric Fuel Pump. When you've tried it, you'll never operate a car without it—even if it does cost a little more. (Send for illustrated folder.)

*REG. U. S. PAT. OFF.



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6000-MILE ROAD
TEST OF THE
'58 OLDSMOBILE

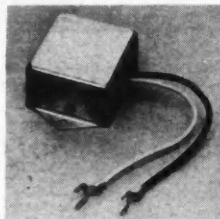
PRODUCT USE TEST

BATTERY BRAIN

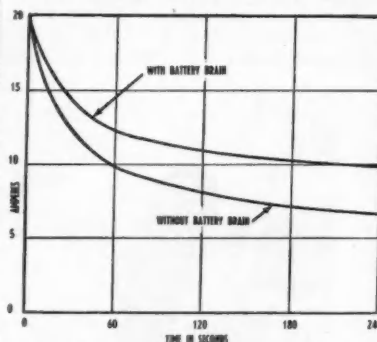
WHEN A CAR BATTERY is low, the regulator automatically increases the generator charging rate until the battery is fully charged; the regulator then cuts down the charging rate to avoid harmful overcharging.

The function of the regulator is dependent on battery condition. As batteries grow older a chemical change takes place which increases internal cell resistance and makes the battery more difficult to charge. Thus a regulator set charging rate to avoid harmful overcharging.

A device called Battery Brain is designed to compensate for this normal battery aging. An electro-thermal switch overrides the regulator action when the battery charge is low so that the charging rate is increased. The device also serves to protect the generator from exceeding its rated output to a point where damage could result.



BRAIN measures 2 x 2 x 1 1/8 inches.



GRAPH shows differences in charging rate with Battery Brain in the circuit.

A '55 Buick with an 18-month-old battery was selected for our test. An ammeter was connected in the generator-battery circuit and a Dixon electric tachometer connected to the distributor. The engine was then cranked with the coil disconnected for one minute to remove the surface charge from the battery. With the engine started, readings of the charging rate were recorded at 10-second intervals. The test procedure was duplicated with the Battery Brain disconnected and then connected to the regulator; engine speed was 1000 rpm during both tests. The graph shows that charging of the aging battery was maintained at a higher rate with the Battery Brain and dropped off less rapidly. It may be concluded that the device serves the purpose for which it is intended.

—Robert C. Scallay

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PRODUCT USE TEST

COLLAPSIBLE TRANSPORTER

HOW MANY TIMES have you been stuck
with more stuff than you can possibly
cram into the trunk or back seat of your
car? That's what happened to us recently
when we were planning a weekend outing
of fishing and fun in the high Sierras. Our
outboard motor, fuel tanks, thermos jugs,
fishing tackle, sleeping bags, and other usual
camping paraphernalia would have had to
go into a second car if we hadn't come across
one of the handiest carry-alls seen in a
long time.

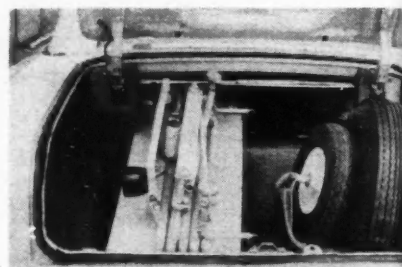
This particular one-wheeled trailer was
originally developed in Sweden about 10
years ago. Most interesting advantage of the
unit is that it is fully collapsible, folding into
an easily storable package of 12x43 inches,
plus a small space required for the 4.00x8
tire. It can be used with or without the 12-
inch-high plywood side rails; without them
longer objects can be carried with ease.

Built with typical Swedish high quality,
the transporter has tubular steel construction
which incorporates horizontal springing. The
wheel is designed for high-speed operation
and is equipped with Timken roller bearings.
While the entire unit weighs only 100
pounds, making handling by one person
easy, the trailer is capable of carrying a 750-
pound load.

On our trip into the mountains, we were
hardly aware of the trailer behind our car,
speaking well for the springing and general
rugged construction of the unit. It takes
curves with the greatest of ease, without the
hazard of spilling its contents.

It's available from Accessories Interna-
tional, 1931 Blake Ave., Los Angeles 39,
Calif. Price without the box is \$129.50; with,
\$149.50.

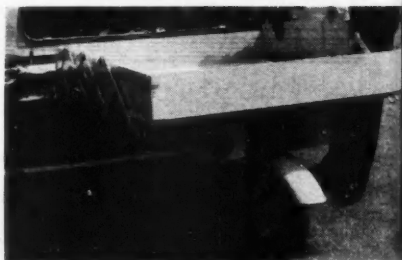
—James E. Potter



UNTIL NEEDED, one-wheeled transporter
can be stored compactly in trunk.

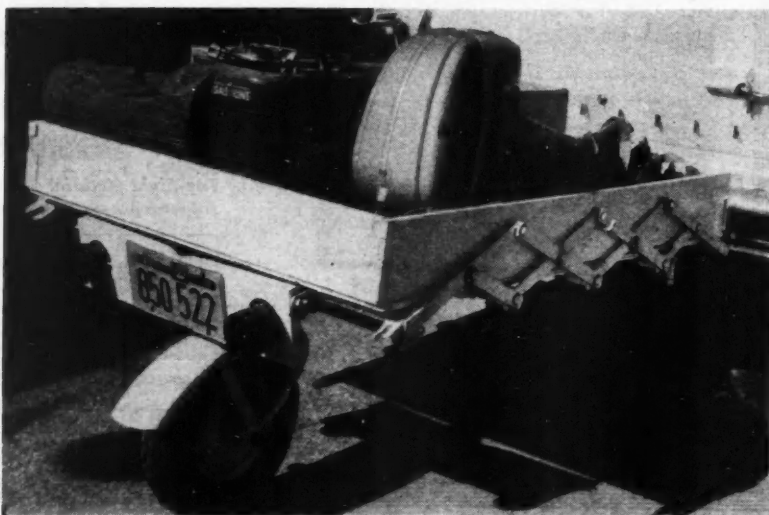


OR IT CAN BE CARRIED in position be-
hind trunk, ready for immediate use.



LOAD CAPACITY is 750 pounds, yet
transporter weighs only 100 pounds.

FULLY EXTENDED, trailer can be used
with 40x50-inch plywood box sides.



PRODUCT USE TEST

EMPIRE SPEED PLATER

BADLY CORRODED bumper on '56 T-Bird was used to test merits of chrome-plating outfit.

FIRST STEP was to remove rust and corrosion with one of several solutions supplied with kit.

RUST REMOVER removed all surface grime and also revealed extent of pitting by corrosive gases.

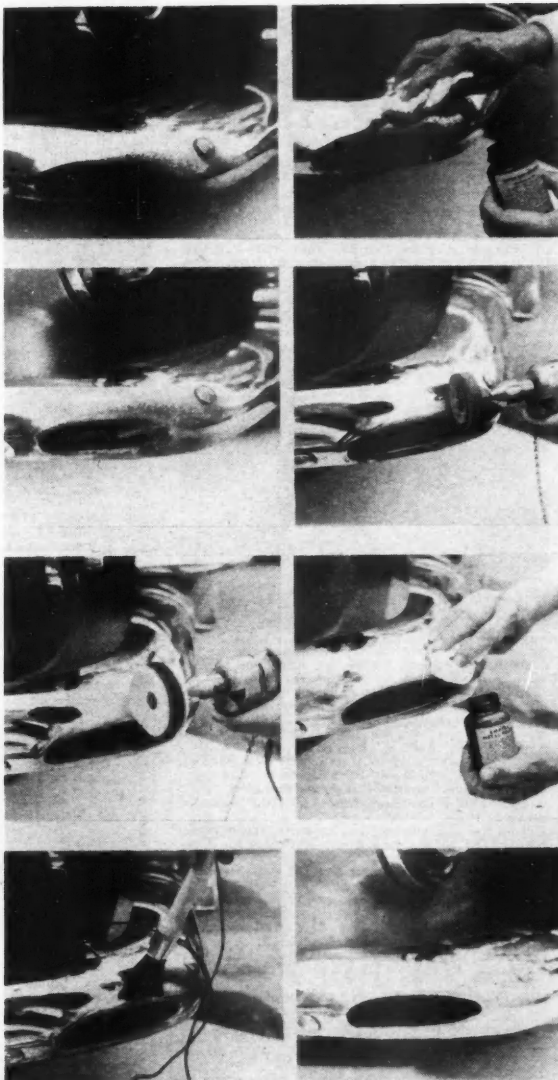
GRINDING was done with abrasive - impregnated rubber wheel which came with the kit.

BUFFING was important operation using wheel and buffing compound supplied with the kit.

AFTER BUFFING, special metal polish supplied with kit was used to remove buffing compound.

COPPER and Briteplate solutions were applied with an electric brush connected to car battery.

FINAL RESULT was gleaming surface replacing pitted and scarred area around tailpipes.



RECENTLY A NUMBER of home chrome-plating kits have reached the market and we were anxious to see if they would solve the problem of touching up damaged chrome. We deliberately picked a difficult test area in the form of a '56 T-Bird bumper which was badly pitted and corroded in the vicinity of the exhaust tips. Our plating kit was the Empire Speed Plater containing 11 items and selling for \$34.95 (smaller kit for \$13.95).

We followed the directions and found the grinding and buffing to be the most important operation. All old chrome, pits and scratches must be removed and the base metal

must be absolutely clean and smooth before the plating is applied.

The actual plating is done with an electric brush connected to the car battery. First comes an application of the copper plating solution and then the final plating solution. This is called Briteplate and contains an alloy resembling chrome in appearance.

The final result was a deposit of bright metal that matched the chrome and was entirely satisfactory. Anyone should be able to obtain similar results if the directions furnished with the kit are followed carefully.

—Robert C. Scollay

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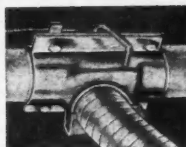
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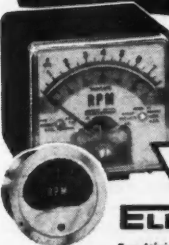
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41 GRAHAM Hollywood with supercharger. In running cond. A. M. Heller, 1479 N. Occidental Blvd., Los Angeles 26. Phone NORmandy 2-9009. '16 OVERLAND Model 80-T touring. Completely orig., except paint & uph. In exc. cond.—runs &



drives like new. Nice tires, low mileage, no rust or dents. Rare specimen. \$2000. Dr. Roy Keith, 15 W. Main St., Brevard, N.C.

'31 HUPMOBILE "New Century 6" 4-dr. sed. Completely orig. thruout—even have owner's manual that came with car. Only 20,812 mi.; powerful, drives like new. Pix on request. \$1000. Dr. Roy Keith, 15 W. Main St., Brevard, N.C.

'26 STAR 4-cyl. coupster. Completely orig. thruout; only 15,000 actual mi. Runs & drives like new. Needs paint on fenders & top of hood. Pix on request. \$1000. Dr. Roy Keith, 15 W. Main St., Brevard, N.C.

'23 MODEL T touring. Never driven much; never been out of county. Completely orig. thruout. Uph. poor on driver's side—exc. cond. otherwise. Pix on request. \$1000. Dr. Roy Keith, 15 W. Main St., Brevard, N.C.

'31 PIERCE-ARROW 5-pass. sed. New tires, chrome, glass, valves, rings, top. Always garaged; used daily. 2nd owner. Best offer over \$1000. Roy Brown, Plympton, Mass. Phone Kingston 2516.

'56 AUSTIN-HEALEY in real good cond. Wire wheels, r & h. \$2295. Charles Benson, 502½ Jasmine, Corona Del Mar, Calif.

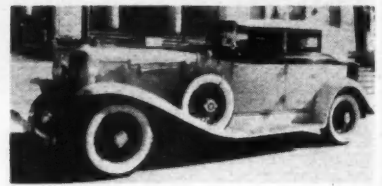
'47 LINCOLN CONTINENTAL cabriolet. '55 Cadillac engine with less than 20,000 mi.; straight shift with o.d. New Naugahyde uph. pleated over foam rubber. Eggshell with black top, Vogue w's. Best offer over \$2495. V. E. Bentley Jr., 1087 Atlantic Dr., N.W. Atlanta 13, Ga. Phone TR 2-1565. VICTRESS Fiberglas rdstr. with Olds engine & Hydra-Matic, 4-barrel carb. Ford running gear. Red



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'32 AUBURN 8 conv. sed. Partially restored; drive anywhere. Good tires, dual-range rear end. \$550



firm. H. B. Wood, 834 Canyon Rd., Santa Fe, N.M. Phone 3-3469.

'56 CHEVROLET V8 BLOCK, new 3½-in. bore, 283 cu. in. \$60; or with crank, cam & connecting rods \$85. B. Ledbetter, 1015 W. 17th St., Texarkana 7, Tex.

CHEVROLET V8 6-volt starter & solenoid to fit '55-'58 models, except 348 cu. in. Saves buying 12-volt equipment when installing in earlier models. B. Ledbetter, 1015 W. 17th St., Texarkana 7, Tex.

'56 CHEVROLET V8 ENGINE, 10,000 mi., \$225. '57 Chevrolet V8 engine, 4000 mi., \$295. Finned alum. Chevrolet V8 valve covers \$10 set. B. Ledbetter, 1015 W. 17th St., Texarkana 7, Tex.

'38 HORCH 5-liter conv. New top, paint, engine o'haul. Extra transmission, starter, generator, carburetor.



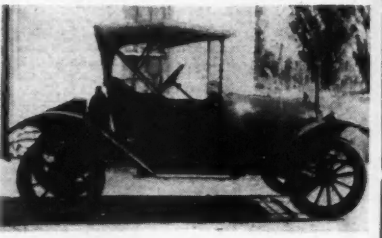
or, distributor, oil pump, water pump, clutch. \$1750. Capt. R. E. Lamp, Hq. 73 A.D., Tyndall AFB, Fla.

1000 EOOKS on Classic & Antique Cars, Automobile Engineering, Motor Racing; Owners Handbooks & Factory Shop Manuals. Catalog 25¢. Vivian Gray, The Motorist's Bookseller, Hurstpoint, Sussex, England.

AUTOMOBILE PHOTOS—of the world's finest cars & coachwork, American & Continental, of the classical era. Not snapshots. Listings 25¢. G. A. Moffitt, 306 W. 94th St., New York 25.

'37 CORD Berline sed. Rare model in fair cond. Asking \$450. H. Lemont, Haynes Rd., Avon, Conn. Phone ORchard 3-3175.

41 LINCOLN CONTINENTAL conv. V-12 o'hauled 1000 mi. ago. New maroon paint, chrome, tires & tubes, red & black Naugahyde uph., top & boot. Many new parts & access. \$1000. Arthur H. Oller Jr., 846 Newton St., San Fernando, Calif. '15 MONROE rdstr. Partially restored; new top, uph. Good tires & paint; good running cond. Best



offer over \$500. Russell M. Kwasigroh, R.R. #1, Box 27, Randolph (10 mi. south of Bloomington), Ill.

'26 LA FRANCE REPUBLIC fire truck in good running order. Engine No. 321983. Also 150 ft. of 2½-in. used fire hose. Forries Auto Sales, 5233 Grand Haven Rd., Muskegon, Mich.

MAGAZINES—6 yrs. MOTOR TREND, 6 yrs. HOT ROD, 5 yrs. MOTOR LIFE, 40 MECHANIC ILLUSTRATED, 28 ROD BUILDERS & CUSTOMIZERS, 14 MOTORCYCLIST, 3 AUTOMOBILE YEAR BOOK. Make offer. John Conne, 491 S. 7th St., San Jose, Calif.

'37 PACKARD Classic 115-C 6 conv. Body, engine, fair; transmission, drive, perfect. Plus almost full set of spare parts. Come & get it. \$250. Sam Davis, Glenwood, Ala.

'37 CORD 812 Beverly sed., supercharged. Exc. tires, body & chrome. Good mechanical & running cond. Parts receipts to '46. \$1000 or best offer. J. P. Lagowski, 862 Copley Rd., Akron 20, Ohio.

'48 LINCOLN CONTINENTAL cabriolet. Perf. cond.—new blue-black top, engine, completely o'hauled, rings, valves & all bearings. Absolutely no rust or pitted chrome. \$1500. Earl D. Lykins, 3707 Auburn Rd., Huntington 4, W. Va.

ALL AMERICAN AUTOMOBILE RECORD—listing over 2000 automobiles made in America, who made them, where & when. Most comprehensive record of its kind known. Postpaid to you for \$1. F. D. Sampier, 5602 Woolworth Ave., Omaha 6, Neb.

57 VOLKSWAGEN ENGINE—almost brand-new. Complete—fitted with high compression Okrasa cylinder heads, 2 carbs, special cam. \$525. Also complete VW transmission with rear axles & brakes, \$225. Henry Elfrink, 1226 Elden Ave., Los Angeles 6, Calif.

14 MODEL T touring—restored & in good cond. Luggage rack, oil gauge, pull starter, Klaxon horn, acetylene generator for lights. \$1450. Leonard Kern, 1610 5th St., Bedford, Ind.

41 LINCOLN CONTINENTAL htdp. Orig. tires; 26,200 mi. Looks, smells & runs like new. Never driven in rain or snow. \$1500. J. J. Poole, P.O. Box 847, New Brunswick, N.J.

33 PLYMOUTH rumbercar cpe. Completely restored, including glass, top, chassis, chrome, uph., etc. Immac. showroom cond.; less than 1000 mi. Sacrifice for best offer. B. T. Wyckoff, 1628 N. Pleasant, Royal Oak, Mich.

34-35 JAGUAR SS-1 tourer. Light body work needed; orig. engine can be repaired. Allan Ripley Jr., 864 Centre St., Brockton, Mass.

24 PACKARD 4-dr. limousine—unrestored. Write for info & price. Fred Hill, Dayton Ave., Manorville, Long Island, N.Y.

48 LINCOLN CONTINENTAL conv. Black, with white top, tubeless tires. One owner; all orig. equip't. radio, heater, power windows, red leather interior—in good cond. Best offer over \$1500. Charles D. Summers, Flamingo Motel, Alton, Ill. Phone Alton 2-0642.

30 MARMON V-16 ENGINE. All-aluminum, hopped-up, o'hauled, 4 carburetors, race cam. \$400 will ship complete engine. Uselman's Inc., Wadena, Minn.

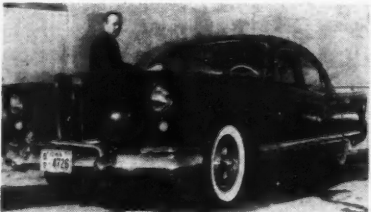
ALL OR PART—Mercedes-Benz 4-dr. sed.; Chrysler 300-B follower, 24,000 mi. Many other wrecked foreign-make cars—whole or part. All Auto Parts Co., 5089 San Fernando Rd. W., Los Angeles 39. Phone CHapman 5-1843.

SELL OR SWAP

39 CADILLAC 4-dr., with sidemounts, sun roof. \$400 spent on engine. Will pay or take cash difference on rdstr. or touring car. H. Gibboney, R.R. #2, Piqua, Ohio. Phone PR 3-6968.

37 FORD 60-hp cpe., plus another for parts. Orig. black finish. \$130 for both cars. Will accept '39 85-hp engine as part payment. N. W. Hamaker, Ononque Trail, Shelton, Conn.

53 KAISER CUSTOM. Completely reworked front & rear; everything mechanical gone over. Showpiece.



\$2500, or trade for stock car of equal value—Prestor Cadillac. S. D. Nelson, 1815 8th Ave. S.W., Cedar Rapids, Iowa.

CUSTOM MERCEDES—National winner. "Bird" hard top, de Dion rear end, Naugahyde interior, 2800 mi.; stored in Detroit. Cost \$6000. Sell for \$1500 cash or trade for 7 Dean Phelps, Room 344, Downtown YMCA, Knoxville, Tenn.

48 LINCOLN CONTINENTAL htdp. Black, with ww's, r & h, o.d. Can be driven anywhere. Trade up or down for sports or foreign car, or sell for \$1050. R. H. Anderson, Box 1074, Columbus, Miss.

40 PACKARD 180 formal town car—White House staff car, FDR rides. New lacquer; mech. perf.; 55,000 mi. \$1000, or trade for Renault Dauphine & pay reasonable difference. Capt. M. B. Hembel, 2605 Patrick Ave., Maryville, Tenn.

WANTED

PARTS FOR '26 BUICK Master 6 rdstr.—headlights with cross brace, ignition switch, other miscellaneous. State price & cond. R. E. Horrobin, 182 Forest Dr., Hillsdale, N. J.

FOUR HUBS, 5 wire or disc wheels with brakes to convert '26 Buick 6 from demountable rims to demountable wheels. Give shipping weight. Phil Gibbons, P.O. Box 946, Hamlet, N. C.

'28 THRU '33 conv., cabriolet, rdstr., or phaeton model. Prefer LaSalle, Lincoln, Packard or Cadillac. Need not be true classic—must be reasonable. Albert M. Fink, Brigham Rd., Gates Mills (Cleveland), Ohio. Phone Hamilton 3-4792.

FOR '29 MARMON—gas gauge, gas tank, windshield vacuum pump, trunk cover. State parts, cond., & price. R. J. Dowler, 513 Thayer Ave., Ashabula, Ohio.

FOR '33 LINCOLN Model KB—owner's instruction book (12-145) & trunk rack. State cond. & price. David P. Welp, Rt. 1, Box 246, Toledo, Ore. CATALOGS, BROCHURES, manuals, nameplates of old autos. Motor magazines, Automobile Trade Journals & Automobile Salon booklets. Paying top dollars. State offerings & asking price. Sheldon J. Lewis, 61-33 213th St., Bayside, Long Island, N. Y. NEW TUCKER ENGINE—complete. J. Woytowich, 78 Rutgers St., Belleville, N. J.

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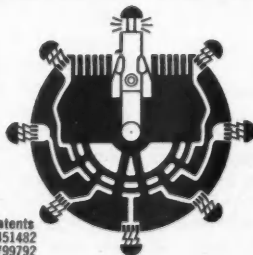
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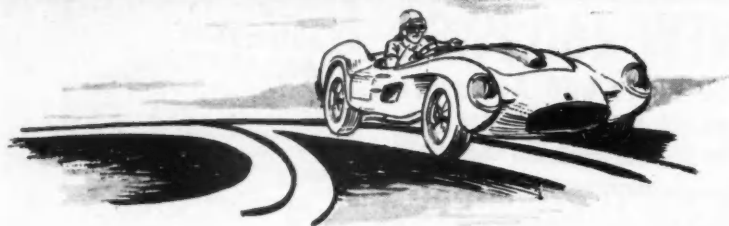
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ESCAPE ROAD

Edited by
Erwin Rosen



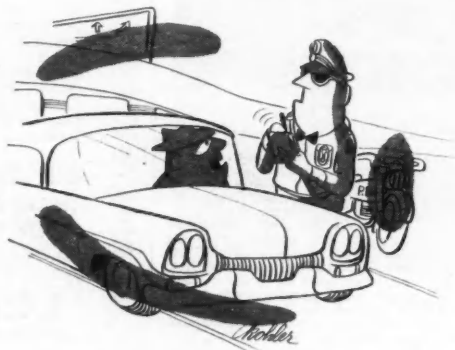
TWO SPINSTER TEACHERS finally realized one of their life-long ambitions—a summer vacation in Europe. To be in the latest traveling fashion, each rented a small rear-engined car to tour some of the country.

During their first day on the road one of the cars conked out. The two non-mechanical tourists finally dared to raise the front hood of the stalled car, and peek underneath.

"Why, no wonder, Matilda," said the driver of the other car knowingly, "you've lost your engine. But don't fret—I have a spare one in my trunk."



"It runs on house power . . . of course it's only good for short trips."



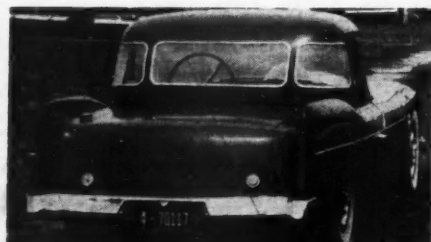
"I don't suppose you'd care to sleep on it...?"



HOPPED-UP HERITAGE

'Seen at Sebring among the cars in the parking area was this sway-backed, high-roofed custom that bore this legend:

"Mother was a Mercury.
My Daddy?
Ford, GM, Chrysler.
Hot rod?
Mother doesn't know."



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